$\Rightarrow$  d his

(FILE 'HOME' ENTERED AT 08:50:58 ON 04 JAN 2010)

FILE 'REGISTRY' ENTERED AT 08:51:08 ON 04 JAN 2010

L1 STRUCTURE UPLOADED

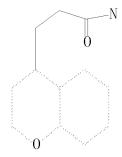
L2 2 S L1

L3 77 S L1 FULL

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L1 STR

SO<sub>3</sub>H



Structure attributes must be viewed using STN Express query preparation. L3 77 SEA FILE=REGISTRY SSS FUL L1

100.0% PROCESSED 202 ITERATIONS

77 ANSWERS

SEARCH TIME: 00.00.01

=> s 13 and caplus/lc 69677821 CAPLUS/LC

L4 58 L3 AND CAPLUS/LC

 $\Rightarrow$  s 13 not 14

L5 19 L3 NOT L4

=> d 1-19 ide can

- ANSWER 1 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN L5
- RN 958868-23-0 REGISTRY
- ED
- Entered STN: 19 Dec 2007 Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium, CN 6-[2-[[(3-carboxypropyl)methylamino]carbonyl]phenyl]-1, 2, 3, 4, 8, 9, 10, 11-octahydro-1, 11-bis(3-sulfopropyl)-, inner salt (CA INDEX NAME)
- C37 H43 N3 010 S2 MF
- CICOM
- SR CA

- L5 ANSWER 2 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 958868-17-2 REGISTRY
- ED Entered STN: 19 Dec 2007
- CN Xanthylium, 9-[2-[[(3-carboxypropyl)methylamino]carbonyl]phenyl]-2,7-dimethyl-3,6-bis[(3-sulfopropyl)amino]-, inner salt (CA INDEX NAME)
- MF C33 H39 N3 010 S2
- CI COM
- SR CA

$$\begin{array}{c} \text{Me} \\ \text{-02C- (CH2)} \, 3 - \text{N-C} \\ \text{Me} \\ \text{Me} \\ \text{Me} \\ \text{HO3S- (CH2)} \, 3 - \text{NH} \\ \end{array}$$

- L5 ANSWER 3 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 958868-15-0 REGISTRY
- ED Entered STN: 19 Dec 2007
- CN Xanthylium, 9-[2-[[(carboxymethyl)methylamino]carbonyl]phenyl]-2,7-dimethyl-3,6-bis[(3-sulfopropyl)amino]-, inner salt (CA INDEX NAME)
- MF C31 H35 N3 010 S2
- CI COM
- SR CA

$$\begin{array}{c} \text{Me} \\ \text{-0}_2\text{C}-\text{CH}_2-\text{N-C} \\ \text{Me} \\ \text{Me} \\ \text{Me} \\ \text{Me} \\ \text{NH- (CH}_2)_3-\text{SO}_3\text{H} \\ \end{array}$$

- L5 ANSWER 4 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 958868-13-8 REGISTRY
- ED Entered STN: 19 Dec 2007
- CN Xanthylium, 9-[2-[[[2-(1,1-dimethylethoxy)-2-oxoethyl]methylamino]carbonyl]phenyl]-2,7-dimethyl-3,6-bis[(3-sulfopropyl)amino]-, inner salt (CA INDEX NAME)
- MF C35 H43 N3 010 S2
- CI COM
- SR CA

- L5 ANSWER 5 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 792904-77-9 REGISTRY
- ED Entered STN: 06 Dec 2004
- CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-(6-hydroxy-2,4,5,7-tetraiodo-3-oxo-3H-xanthen-9-y1)-5-sulfobenzoy1]amino]ethyl]amino]-6-oxohexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(2-sulfoethyl)-, inner salt (CA INDEX NAME)

- CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-(6-hydroxy-2,4,5,7-tetraiodo-3-oxo-3H-xanthen-9-y1)-5-sulfobenzoy1]amino]ethy1]amino]-6-oxohexy1]-5-pheny1-2(3H)-benzoxazolylidene]methy1]-1-buteny1]-5-pheny1-3-(2-sulfoethy1)-, inner salt (9CI)
- MF C61 H50 I4 N4 O13 S2
- CI COM
- SR CA

- L5 ANSWER 6 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 790656-76-7 REGISTRY
- ED Entered STN: 30 Nov 2004
- CN Benzoxazolium, 2-[2-[[3-[6-oxo-6-[[2-[[5-sulfo-2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)benzoyl]amino]ethyl]amino]hexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(2-sulfoethyl)-, inner salt (CA INDEX NAME)

- CN Benzoxazolium, 2-[2-[[3-[6-oxo-6-[[2-[[5-sulfo-2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-y1)benzoy1]amino]ethyl]amino]hexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt (9CI)
- MF C61 H50 Br4 N4 O13 S2
- CI COM
- SR CA

- L5 ANSWER 7 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 782447-62-5 REGISTRY
- ED Entered STN: 16 Nov 2004
- CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-[3,6-bis(diethylamino)xanthylium-9-y1]benzoy1]amino]ethyl]amino]-6-oxohexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(2-sulfoethyl)-, inner salt (CA INDEX NAME)

- CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-[[3,6-bis(diethylamino)xanthylium-9-y1]benzoy1]amino]ethyl]amino]-6-oxohexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, mono(inner salt) (9CI)
- MF C69 H73 N6 08 S
- CI COM
- SR CA

PAGE 1-A

Ph 
$$CH = C - CH = C$$

PAGE 1-B

- ANSWER 8 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN L5
- RN 773032-51-2 REGISTRY
- ED
- Entered STN: 31 Oct 2004
  Xanthylium, 3,6-bis(diethylamino)-9-[2-[[(3-sulfophenyl)amino]carbonyl]phenyl]- (CA INDEX NAME)
  C34 H36 N3 O5 S CN
- MF
- CICOM
- SR CA

$$\begin{array}{c|c} \text{HO}_{3S} & \text{O} \\ \hline \\ \text{Et}_{2N} & \text{O}_{+} & \text{NEt}_{2} \end{array}$$

- L5 ANSWER 9 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 768357-90-0 REGISTRY
- ED Entered STN: 25 Oct 2004
- CN Benzoxazolium, 5-(4-bromopheny1)-2-[2-[[5-(4-bromopheny1)-3-[13-oxo-13-[2,3,4,5-tetrachloro-6-(6-hydroxy-3-oxo-2,7-disulfo-3H-xanthen-9-y1)pheny1]-3,6,9-trioxa-12-azatridec-1-y1]-2(3H)-benzoxazolylidene]methy1]-1-buten-1-y1]-3-(2-sulfoethy1)-, inner salt (CA INDEX NAME)
- OTHER CA INDEX NAMES:
- CN Benzoxazolium, 5-(4-bromopheny1)-2-[2-[[5-(4-bromopheny1)-3-[13-oxo-13-[2,3,4,5-tetrachloro-6-(6-hydroxy-3-oxo-2,7-disulfo-3H-xanthen-9-yl)phenyl]-3,6,9-trioxa-12-azatridec-1-yl]-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(2-sulfoethyl)-, inner salt (9CI)
- MF C61 H49 Br2 C14 N3 O18 S3
- CI COM
- SR CA

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- L5 ANSWER 10 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 758683-35-1 REGISTRY
- ED Entered STN: 08 Oct 2004
- CN Benzoxazolium, 2-[2-[[3-[13-[2-[3,6-bis(diethylamino)xanthylium-9-y1]phenyl]-13-oxo-3,6,9-trioxa-12-azatridec-1-y1]-2(3H)-benzothiazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(3-sulfopropyl)-, inner salt (CA INDEX NAME)

- CN Benzoxazolium, 2-[2-[[3-[13-[2-[3,6-bis(diethylamino)xanthylium-9-y1]phenyl]-13-oxo-3,6,9-trioxa-12-azatridec-1-y1]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(3-sulfopropyl)-, mono(inner salt) (9CI)
- MF C64 H72 N5 09 S2
- CI COM
- SR CA

PAGE 1-A

PAGE 2-A

- L5 ANSWER 11 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 757939-74-5 REGISTRY
- ED Entered STN: 07 Oct 2004
- CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-[3,6-bis(ethylamino)-2,7-dimethylxanthylium-9-y1]benzoy1]amino]ethyl]amino]-6-oxohexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(2-sulfoethyl)-, inner salt (CA INDEX NAME)

- CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-[3,6-bis(ethylamino)-2,7-dimethylxanthylium-9-y1]benzoy1]amino]ethyl]amino]-6-oxohexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, mono(inner salt) (9CI)
- MF C67 H69 N6 08 S
- CI COM
- SR CA

PAGE 1-A

PAGE 1-B

- L5 ANSWER 12 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 741247-75-6 REGISTRY
- ED Entered STN: 08 Sep 2004
- CN Benzoxazolium, 2-[2-[[3-[6-oxo-6-[[2-[[2,3,4,5-tetrachloro-6-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-y1)benzoy1]amino]ethy1]amino]hexy1]-5-pheny1-2(3H)-benzoxazolylidene]methy1]-1-buten-1-y1]-5-pheny1-3-(2-sulfoethy1)-, inner salt (CA INDEX NAME)

- CN Benzoxazolium, 2-[2-[[3-[6-oxo-6-[[2-[[2,3,4,5-tetrachloro-6-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-y1)benzoy1]amino]ethy1]amino]hexy1]-5-pheny1-2(3H)-benzoxazolylidene]methy1]-1-buteny1]-5-pheny1-3-(2-sulfoethy1)-, inner salt (9CI)
- MF C61 H46 Br4 C14 N4 O10 S
- CI COM
- SR CA

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PAGE 1-B

- L5 ANSWER 13 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 730241-66-4 REGISTRY
- ED Entered STN: 22 Aug 2004
- CN Benzoxazolium, 5-(4-bromophenyl)-2-[2-[[5-(4-bromophenyl)-3-[6-[[3-[[2-(6-hydroxy-2,4,5,7-tetraiodo-3-oxo-3H-xanthen-9-yl)benzoyl]amino]propyl]amino]-6-oxohexyl]-2(3H)-benzoxazolylidene]methyl]-1-buten-1-yl]-3-(2-sulfoethyl)-, inner salt (CA INDEX NAME)

  OTHER CA INDEX NAMES:
- CN Benzoxazolium, 5-(4-bromophenyl)-2-[2-[[5-(4-bromophenyl)-3-[6-[[3-[[2-(6-hydroxy-2,4,5,7-tetraiodo-3-oxo-3H-xanthen-9-yl)benzoyl]amino]propyl]amino]-6-oxohexyl]-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-3-(2-sulfoethyl)-, inner salt (9CI)
- MF C62 H50 Br2 I4 N4 O10 S
- CI COM
- SR CA

- L5 ANSWER 14 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 726697-05-8 REGISTRY
- ED Entered STN: 13 Aug 2004
- CN Benzoxazolium, 2-[2-[[3-[6-oxo-6-[[2-[[2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-y1)benzoy1]amino]ethy1]amino]hexy1]-5-pheny1-2(3H)-benzoxazolylidene]methy1]-1-buten-1-y1]-5-pheny1-3-(2-sulfoethy1)-, inner salt (CA INDEX NAME)

- CN Benzoxazolium, 2-[2-[[3-[6-oxo-6-[[2-[[2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-y1)benzoy1]amino]ethy1]amino]hexy1]-5-pheny1-2(3H)-benzoxazoly1idene]methy1]-1-buteny1]-5-pheny1-3-(2-sulfoethy1)-, inner salt (9CI)
- MF C61 H50 Br4 N4 O10 S
- CI COM
- SR CA

- L5 ANSWER 15 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 715654-23-2 REGISTRY
- ED Entered STN: 23 Jul 2004
- CN Benzoxazolium, 2-[2-[[3-[13-oxo-13-[2,3,4,5-tetrachloro-6-(6-hydroxy-2,4,5,7-tetraiodo-3-oxo-3H-xanthen-9-yl)phenyl]-3,6,9-trioxa-12-azatridec-1-yl]-2(3H)-benzothiazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(3-sulfopropyl)-, inner salt (CA INDEX NAME)

- CN Benzoxazolium, 2-[2-[[3-[13-oxo-13-[2,3,4,5-tetrachloro-6-(6-hydroxy-2,4,5,7-tetraiodo-3-oxo-3H-xanthen-9-yl)phenyl]-3,6,9-trioxa-12-azatridec-1-yl]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt (9CI)
- MF C56 H45 C14 I4 N3 O11 S2
- CI COM
- SR CA

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L5 ANSWER 16 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN

RN 198821-70-4 REGISTRY

ED Entered STN: 19 Dec 1997

CN Xanthylium, 9-[2-[(butylamino)carbonyl]phenyl]-3-[(2-chlorophenyl)amino]-6-[(2-methoxy-5-sulfophenyl)amino]-, methyl sulfate (1:1) (CA INDEX NAME) OTHER CA INDEX NAMES:

CN Xanthylium, 9-[2-[(butylamino)carbonyl]phenyl]-3-[(2-chlorophenyl)amino]-6-[(2-methoxy-5-sulfophenyl)amino]-, methyl sulfate (9CI)

MF C37 H33 C1 N3 O6 S . C H3 O4 S

CI COM

SR CA

CM 1

CRN 195260-87-8

CMF C37 H33 C1 N3 O6 S

CM 2

CRN 21228-90-0 CMF C H3 O4 S

 $Me - 0 - S03^-$ 

- ANSWER 17 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN L5
- 195260-87-8 REGISTRY RN
- ED Entered STN: 10 Oct 1997
- Xanthylium, 9-[2-[(butylamino)carbonyl]phenyl]-3-[(2-chlorophenyl)amino]-6-[(2-methoxy-5-sulfophenyl)amino]- (CA INDEX NAME)
  C37 H33 C1 N3 06 S CN
- MF
- CICOM
- SR CA

- L5 ANSWER 18 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 195260-63-0 REGISTRY
- ED Entered STN: 10 Oct 1997
- CN Xanthylium, 9-[2-[(butylamino)carbonyl]phenyl]-3-[(2-fluorophenyl)amino]-6-[(8-sulfo-1-naphthalenyl)amino]- (CA INDEX NAME)
- MF C40 H33 F N3 05 S
- CI COM
- SR CA

- L5 ANSWER 19 OF 19 REGISTRY COPYRIGHT 2010 ACS on STN
- RN 192720-28-8 REGISTRY
- ED Entered STN: 15 Aug 1997
- CN Xanthylium, 9-[2-[(butylamino)carbonyl]phenyl]-3-[(2-carboxyphenyl)amino]-6-[[2-(2-propyn-1-yloxy)-5-sulfophenyl]amino]- (CA INDEX NAME)
- OTHER CA INDEX NAMES:
- CN Xanthylium, 9-[2-[(butylamino)carbonyl]phenyl]-3-[(2-carboxyphenyl)amino]-6-[[2-(2-propynyloxy)-5-sulfophenyl]amino]-(9CI)
- MF C40 H34 N3 08 S
- CI COM
- SR CA

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FILE COVERS 1907 - 4 Jan 2010 VOL 152 ISS 2 FILE LAST UPDATED: 3 Jan 2010 (20100103/ED) REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2009 USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2009

CAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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This file contains CAS Registry Numbers for easy and accurate substance identification. '.FIONA' IS DEFAULT FORMAT FOR 'CAPLUS' FILE

=> s 13 L6 15 L3

=> d 1-15 bib abs hitstr

- L6 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
- AN 2009:1260869 CAPLUS
- TI New GM1 Ganglioside Derivatives for Selective Single and Double Labelling of the Natural Glycosphingolipid Skeleton
- AU Polyakova, Svetlana M.; Belov, Vladimir N.; Yan, Sergey F.; Eggeling, Christian; Ringemann, Christian; Schwarzmann, Guenter; de Meijere, Armin; Hell, Stefan W.
- CS Department of NanoBiophotonics, Max Planck Institute for Biophysical Chemistry, Goettingen, 37077, Germany
- SO European Journal of Organic Chemistry (2009), (30), 5162-5177, S5162/1-S5162/6 CODEN: EJOCFK; ISSN: 1434-193X
- PB Wiley-VCH Verlag GmbH & Co. KGaA
- DT Journal
- LA English
- AB Selective single and double labeling of the natural ganglioside GM1 enables one to introduce various markers into different parts of the glycosphingolipid mol. without changing the natural skeleton. end, N-Fmoc-2-amino-, N-Fmoc-18-amino- and S-(ethoxythiocarbonyl)-18-mercaptostearic acids have been prepared and coupled with the primary amino group in the sphingosine part of lyso-GM1 and deAc-deAcyl-GM1 gangliosides. The products of these coupling reactions may be used for the synthesis of GM1 derivs. with one or two fluorescent dye moieties or other labels of various polarities. of various labeling strategies, using hydrophilic and lipophilic photostable fluorescent dyes, have been made available. The GM1 derivs. labeled with the fluorescent dye ATTO 647N or a doubly labeled derivative can be used as probes in fluorescence correlation spectroscopy (in conventional microscopy or stimulated emission depletion nanoscopy) to study the diffusion of lipid analogs in model or live cell membranes. (.COPYRGT. Wiley-VCH Verlag GmbH & Co. KGaA, 69451 Weinheim, Germany, 2009).
- IT 1199580-29-4P 1199580-91-0P

RL: ARG (Analytical reagent use); BUU (Biological use, unclassified); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)

(new GM1 ganglioside derivs. for selective single and double labeling of natural glycosphingolipid skeleton)

- RN 1199580-29-4 CAPLUS
- CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry.

Double bond geometry as shown.

## PAGE 1-A

## PAGE 1-B

PAGE 2-B

RN 1199580-91-0 CAPLUS CN INDEX NAME NOT YET ASSIGNED

Absolute stereochemistry. Double bond geometry as shown.

PAGE 1-A

PAGE 1-B

PAGE 2-B

IT <u>1032434-41-5</u> <u>1032434-42-6</u>

RL: RCT (Reactant); RACT (Reactant or reagent) (new GM1 ganglioside derivs. for selective single and double labeling of natural glycosphingolipid skeleton)

RN 1032434-41-5 CAPLUS

CN Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium,
1, 2, 3, 4, 8, 9, 10, 11-octahydro-6-[2-[[(2-hydroxyethyl)methylamino]carbonyl]phenyl]-12, 14-disulfo-, inner salt (CA INDEX NAME)

RN 1032434-42-6 CAPLUS

CN Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium,
1,2,3,4,8,9,10,11-octahydro-6-[2-[[methy1[2-[[(4nitrophenoxy)carbony1]oxy]ethy1]amino]carbony1]pheny1]-12,14-disulfo-,
inner salt (CA INDEX NAME)

 $\begin{array}{c} \text{IT} & \underline{1032434-43-7P} \\ 1199580-22-7P \end{array}$ 

1032434-47-1P 1199580-23-8P 1199580-20-5P 1199580-48-7P

1199580-49-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(new GM1 ganglioside derivs. for selective single and double labeling of natural glycosphingolipid skeleton)

RN 1032434-43-7 CAPLUS

CN Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium,

6-[2-[[[2-[[[(2,5-dioxo-1-

pyrrolidinyl)oxy]carbonyl]oxy]ethyl]methylamino]carbonyl]phenyl]-

1, 2, 3, 4, 8, 9, 10, 11-octahydro-12, 14-disulfo-, inner salt (CA INDEX NAME)

RN 1032434-47-1 CAPLUS

CN Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium, 6-[2-[[3-[(2,5-dioxo-1-pyrrolidinyl)oxy]-3-oxopropyl]methylamino]carbonyl]phenyl]-1, 2, 3, 4, 8, 9, 10, 11-octahydro-12, 14-disulfo-, inner salt (CA INDEX NAME)

RN 1199580-20-5 CAPLUS CN INDEX NAME NOT YET ASSIGNED

RN 1199580-22-7 CAPLUS CN INDEX NAME NOT YET ASSIGNED

$$\begin{array}{c} & & & & & & & & \\ & & & & & & \\ & & & & & \\ & & & & \\ & & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & & & \\ & &$$

RN 1199580-23-8 CAPLUS CN INDEX NAME NOT YET ASSIGNED

RN 1199580-48-7 CAPLUS CN INDEX NAME NOT YET ASSIGNED

$$\begin{array}{c} \text{Me} \\ \text{Me} \\ \text{Me} \\ \text{N} \\ \text{Me} \\ \text{N} \\ \text{Me} \\ \text{Me} \\ \text{N} \\ \text{Me} \\ \text{Me} \\ \text{CH}_2-\text{S0}_3\text{H} \\ \text{HO-CH}_2-\text{CH}_2-\text{N-C} \\ \text{Me} \\ \text{Me} \\ \text{N} \\ \text{N} \\ \text{Me} \\ \text{N} \\ \text{Me} \\ \text{N} \\ \text{Me} \\ \text{N} \\$$

RN 1199580-49-8 CAPLUS CN INDEX NAME NOT YET ASSIGNED

$$\begin{array}{c} \text{Me} \\ \text{Me} \\ \text{Me} \\ \text{N} \\ \text{O} \\$$

RE. CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L6 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
- AN 2009:767810 CAPLUS
- DN 151:96479
- TI Fluorescent compounds for labeling biomolecules and cells and use in kits and assays
- IN Mao, Fei; Leung, Wai-Yee; Cheung, Ching-Ying; Hoover, Hye Eun
- PA Biotium, Inc., USA
- SO PCT Int. Appl., 157pp.

CODEN: PIXXD2

- DT Patent
- LA English
- FAN. CNT 1

TAIN.	PATENT NO.					D	DATE		APPLICATION NO.						DATE		
PΙ	WO 2009078970				A1		20090625		WO 2008-US13698						20081212		
	W:	ΑE,	AG,	AL,	AM,	A0,	AT,	AU,	AZ,	BA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,
		CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
		FΙ,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,
		KG,	KM,	KN,	KP,	KR,	KZ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
		ME,	MG,	MK,	MN,	MW,	MX,	MY,	MΖ,	NA,	NG,	ΝI,	NO,	NZ,	OM,	PG,	PH,
		PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	ST,	SV,	SY,	ТJ,
		TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW		
	RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HR,	HU,
		IE,	IS,	ΙT,	LT,	LU,	LV,	MC,	MT,	NL,	NO,	PL,	PT,	RO,	SE,	SI,	SK,
		TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,
		TG,	BW,	GH,	GM,	KE,	LS,	MW,	ΜZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,
		AM,	ΑZ,	BY,	KG,	KZ,	MD,	RU,	TJ,	TM							
	US 20090305410				A1		20091210 US 2008-334387							20081212			
PRAI US 2007-13956P				Р		2007	1214										
OS MARPAT 151:96479																	
GI																	

AB The present invention relates to fluorescent dyes in general. The present invention provides a wide range of fluorescent dyes and kits containing the same, which are applicable for labeling a variety of biomols., cells and microorganisms. The present invention also provides various methods of using the fluorescent dyes for research and development, forensic identification, environmental studies, diagnosis, prognosis, and/or

treatment of disease conditions. Fluorescent dye I (preparation given) was conjugated with goat anti-mouse IgG and with aminophalloidin. Actin filaments were stained with phalloidin labeled with I. I conjugate was more photostable than a conjugate with Alex Fluor 488.

IT 1164239-41-1

CN

RL: ARG (Analytical reagent use); PRPH (Prophetic); ANST (Analytical study); USES (Uses)

(as fluorescent xanthene dye; fluorescent compds. for labeling biomols. and cells and use in kits and assays)

RN 1164239-41-1 CAPLUS

Poly(oxy-1,2-ethanediyl),  $\alpha$ -hydro- $\omega$ -methoxy-, ether with 5-[2-[[[6-[(2,5-dioxo-1-pyrrolidinyl)oxy]-6-oxohexyl](2-hydroxyethyl)amino]carbonyl]-5-[[(2-hydroxyethyl)amino]sulfonyl]phenyl]-1,2,3,7,8,9-hexahydro-2,3,3,7,7,8-hexamethyl-10,12-disulfopyrano[3,2-f:5,6-f']diindol-11-ium inner salt (2:1) (CA INDEX NAME)

PAGE 1-B

$$-CH_2$$
  $-CH_2$   $-CH_$ 

RE. CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 3 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
L6
     2009:422071 CAPLUS
AN
DN
     150:425027
ΤI
     Amide-substituted fluorescent xanthene dyes
IN
     Lukhtanov, Eugene
PA
     Epoch Biosciences, Inc., USA
S0
     PCT Int. Appl., 84pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN. CNT 1
     PATENT NO.
                           KIND
                                  DATE
                                               APPLICATION NO.
                                                                        DATE
                                  20090409
PΙ
     WO 2009046165
                                               WO 2008-US78540
                                                                        20081002
                           Α1
              AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY,
         W:
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                                  CU, CZ,
              CA, CH, CN,
                          CO, CR,
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              FI, GB,
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                               GH, GM, GT, HN, HR, HU, ID,
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                      KN,
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                      BG, CH, CY, CZ,
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                                   LV,
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                      BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
                                                                 MR,
              TR, BF,
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                                                                              TD,
              TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
              AM, AZ, BY, KG, KZ, MD, RU,
                                            TJ, TM
     US 20090093612
                           A1
                                  20090409
                                               US 2008-244712
                                                                        20081002
                           Р
                                  20071003
PRAI US 2007-977316P
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
0S
     MARPAT 150:425027
GI
```

F F 
$$CO-NEt_2$$
F  $CO-NEt_2$ 
 $CO-NE_1$ 
 $CO-NE_1$ 

AB Amide-substituted xanthene fluorescent dyes such as I can be prepared from xanthene dyes using a phosphonylation agent (II). Thus, I was prepared by mixing 0.85 g a Br-substituted xanthene dye, 2.2 mL DMF, 1 mL N-ethylmorpholine and 1.27 g II and heating 3 h at 70° in the presence of 0.12 g tetrakis(triphenylphosphine)palladium followed by treating with pentafluorophenyl trifluoroacetate and reacting with diethylamine.

IT <u>1140967-15-2P</u> <u>1140967-16-3P</u>

RL: IMF (Industrial manufacture); PRPH (Prophetic); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(amide-substituted fluorescent xanthene dyes)

RN 1140967-15-2 CAPLUS

CN INDEX NAME NOT YET ASSIGNED

$$\begin{array}{c} \text{Me} \\ \text{Me} \\ \text{N} \\ \text{Me} \\ \text{O} \\ \text{Me} \\ \text{O} \\ \text{Me} \\ \text{Br} \\ \end{array}$$

RN 1140967-16-3 CAPLUS CN INDEX NAME NOT YET ASSIGNED

IT 1140967-10-7P

RL: IMF (Industrial manufacture); PRPH (Prophetic); PREP (Preparation) (dye; amide-substituted fluorescent xanthene dyes)

RN 1140967-10-7 CAPLUS

CN INDEX NAME NOT YET ASSIGNED

RE. CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 4 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
L6
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2008:505287 CAPLUS AN

DN 148:466517

- ΤI Latent fluorescent probes containing fluorophore and associated fluorescence quencher and method for detection of biological matter on surgical instruments
- TN Baxter, Robert Laurence; Jones, Anita Claire; Baxter, Helen Cochrane; Richardson, Patricia Rose; Grant, Keith James; Halouani, Hatem

The University of Edinburgh, UK PA

S0PCT Int. Appl., 54 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN. CNT 1

	PATENT NO.				KIND		DATE		APPLICATION NO.				DATE					
PΙ		2008047129 2008047129			A2 A3		20080424 20081127		WO 2007-GB3978					20071018				
		W:	AE,	AG,	AL,		AT,	AU,	AZ,	ВА,	ВВ,	BG,	ВН,	BR,	BW,	ВҮ,	BZ,	CA,
			CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,	FΙ,
			GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,
			KM,	KN,	KP,	KR,	KZ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,	ME,
			MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NI,	NO,	NZ,	OM,	PG,	PH,	PL,
			PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	TJ,	TM,	TN,
			TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW				
		RW:	AT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HU,	IE,
			IS,	IT,	LT,	LU,	LV,	MC,	MT,	NL,	PL,	PT,	RO,	SE,	SI,	SK,	TR,	BF,
			BJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,	TG,	BW,
			GH,	GM,	KE,	LS,	MW,	MΖ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	AZ,
			BY,					TJ,						Í	ĺ	ĺ	ĺ	
PRAT	GB	2006				A		2006		ĺ	Í	Í						

20061018

Compds. for use as latent fluorescent probes, and methods for the AB detection of biol. matter on surgical instruments, and for the detection of analytes, is described. The compds, comprise a fluorophore, and an associated fluorescence quencher which inhibits the normal fluorescence of the fluorophore until certain conditions are fulfilled, which conditions may include contact of the compound with a biol. material including substances capable of reacting with one or more functionalities of the compound

TT 1020201-00-6P

> RL: ARG (Analytical reagent use); PRP (Properties); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (latent fluorescent probes containing fluorophore and associated fluorescence quencher and method for detection of biol. matter on surgical instruments)

RN 1020201-00-6 CAPLUS

Xanthylium, 9-[2-[[(2,6-diiodo-4-sulfophenyl)amino]carbonyl]phenyl]-3,6-CN dihydroxy-, inner salt (CA INDEX NAME)

- L6 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
- AN 2008:486445 CAPLUS
- DN 149:55630
- TI Photostable, amino reactive and water-soluble fluorescent labels based on sulfonated rhodamine with a rigidized xanthene fragment
- AU Boyarskiy, Vadim P.; Belov, Vladimir N.; Medda, Rebecca; Hein, Birka; Bossi, Mariano; Hell, Stefan W.
- CS Department of NanoBiophotonics, Max Planck Institute for Biophysical Chemistry, Goettingen, 37077, Germany
- SO Chemistry—A European Journal (2008), 14(6), 1784-1792 CODEN: CEUJED; ISSN: 0947-6539
- PB Wiley-VCH Verlag GmbH & Co. KGaA
- DT Journal
- LA English
- OS CASREACT 149:55630
- AB Highly water soluble fluorescent dyes were synthesized and transformed into new amino reactive fluorescent labels for biol. microscopy. To this end, a rhodamine was sulfonated with 30% SO3 in H2SO4 and afforded the water-soluble disulfonic acid. Amidation of the carboxy group in this compound with 2-(methylamino)ethanol in the presence of 0-(7-azabenzotriazol-1-yl)-N, N, N', N'-tetramethyluronium hexafluorophosphate led to an alc., which was transformed into an amino reactive mixed carbonate with di(N-succinimidyl) carbonate and Et3N. Reaction of the carboxy group in the original disulfonic acid with MeNH (CH2) 2CO2Me and N, N, N', N'-tetramethy1-O-(N-succinimidy1)uronium BF4- yielded the Me ester. After saponification of the aliphatic carboxy group in this Me ester, the compound was converted into an Heating of tetrahydro-7-quinolinol with trimellitic anhydride NHS-ester. in H3PO4 gave a 1:1 mixture of rhodamine dicarboxylic acid regioisomers. One of the regioisomers was isolated, sulfonated with 30% S03 in H2S04, and the resulting disulfonic acid was used for the synthesis of the mono NHS-ester in which the sterically unhindered carboxy group was selectively activated with N-hydroxysuccinimide. Three of the sulfonated rhodamines are soluble in water (up to 0.1 M) and have excellent photostabilities and large fluorescence quantum yields. Subdiffraction resolution images of tubulin filaments of mammalian cells stained with these dves illustrate their applicability as labels for stimulated emission depletion microscopy and other fluorescence techniques.
- IT 1032434-44-8P 1032434-46-0P
  - RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
    - (intermediate; preparation of fluorescent labels based on sulfonated rhodamines with rigidized xanthene fragment)
- RN 1032434-44-8 CAPLUS
- CN Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium,
  - 1, 2, 3, 4, 8, 9, 10, 11-octahydro-6-[2-[[(3-methoxy-3-oxopropy1)methylamino]carbonyl]phenyl]-12, 14-disulfo-, inner salt (CAINDEX NAME)

RN 1032434-46-0 CAPLUS

CN Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium, 6-[2-[[(2-carboxyethyl)methylamino]carbonyl]phenyl]-1, 2, 3, 4, 8, 9, 10, 11-octahydro-12, 14-disulfo-, inner salt (CA INDEX NAME)

IT 1032434-41-5P

RL: BSU (Biological study, unclassified); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); BIOL (Biological study); PREP

(Preparation); RACT (Reactant or reagent)

(preparation of fluorescent labels based on sulfonated rhodamines with rigidized xanthene fragment)

RN 1032434-41-5 CAPLUS

CN Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium,
1, 2, 3, 4, 8, 9, 10, 11-octahydro-6-[2-[[(2-hydroxyethyl)methylamino]carbonyl]phenyl]-12, 14-disulfo-, inner salt (CIINDEX NAME)

IT 1032434-43-7P 1032434-47-1P

RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation) (preparation of fluorescent labels based on sulfonated rhodamines with rigidized xanthene fragment)

RN

1032434-43-7 CAPLUS Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium, CN 6-[2-[[[2-[[[(2,5-dioxo-1pyrrolidinyl)oxy]carbonyl]oxy]ethyl]methylamino]carbonyl]phenyl]-1, 2, 3, 4, 8, 9, 10, 11-octahydro-12, 14-disulfo-, inner salt (CA INDEX NAME)

1032434-47-1 CAPLUS RN

Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium, 6-[2-[[[3-[(2,5-dioxo-1-pyrrolidinyl)oxy]-3oxopropy1]methylamino]carbony1]pheny1]-1, 2, 3, 4, 8, 9, 10, 11-octahydro-12, 14disulfo-, inner salt (CA INDEX NAME)

- IT 1032434-42-6P
  - RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation of fluorescent labels based on sulfonated rhodamines with rigidized xanthene fragment)
- RN 1032434-42-6 CAPLUS
- CN Pyrano[3,2-g:5,6-g']diquinolin-13-ium,
  1,2,3,4,8,9,10,11-octahydro-6-[2-[[methy1[2-[[(4nitrophenoxy)carbony1]oxy]ethy1]amino]carbony1]pheny1]-12,14-disulfo-,
  inner salt (CA INDEX NAME)

OSC. G 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (6 CITINGS)
RE. CNT 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L6
     ANSWER 6 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
     2007:1364408 CAPLUS
AN
DN
     148:35065
ΤI
     Rhodamine fluorescent dye compounds and the use of their labeled
     con jugates
IN
     Romanov, Nikolai Nikolaevich; Barnes, Colin Lloyd
PA
     Solexa Limited, UK
     PCT Int. Appl., 102 pp.
S0
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN. CNT 1
     PATENT NO.
                          KIND
                                 DATE
                                              APPLICATION NO.
                                                                       DATE
PΙ
     WO 2007135368
                           A2
                                  20071129
                                              WO 2007-GB1770
                                                                       20070516
     WO 2007135368
                                  20080306
                           A3
         W:
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA,
             CH, CN, CO, CR, CU, CZ, DE,
                                           DK, DM, DZ, EC,
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         RW: AT,
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                                                                        AM,
                                                                             AZ,
                 KG, KZ, MD, RU, TJ, TM, AP, EA, EP,
             BY,
                                                        OA
     EP 2021415
                                  20090211
                                              EP 2007-732794
                                                                       20070516
                           A2
         R:
             AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
                              LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR,
              IS, IT, LI,
                         LT,
             AL, BA, HR, MK,
                              RS
PRAI US 2006-801270P
                           Р
                                  20060518
     WO 2007-GB1770
                           W
                                  20070516
0S
     CASREACT 148:35065; MARPAT 148:35065
AB
     The invention relates to rhodamine dyes particularly suitable for methods
     of fluorescence detection and sequencing synthesis.
                                                             The dyes and labeled
     conjugates are useful as mol. probes in a variety of applications, such as
     in assays involving staining of cells, protein binding, and anal. of
     nucleic acids, such as hybridization assays and nucleic acid sequencing.
     Thus, a rhodamine dye bearing N-propylsulfonic acid ammonium salt was
     prepared and tested.
IT
     958868-16-1P
     RL: IMF (Industrial manufacture); PREP (Preparation)
         (manufacture of rhodamine fluorescent dye compds. and use in biomol.
        staining or labeling)
     958868-16-1
RN
                  CAPLUS
CN
     Xanthylium, 9-[2-[[(carboxymethyl)methylamino]carbonyl]phenyl]-2,7-
     dimethyl-3, 6-bis[(3-sulfopropyl)amino]-, inner salt, compd. with
     N, N-diethylethanamine (1:1) (CA INDEX NAME)
     CM
          1
     CRN
          958868-15-0
     CMF
          C31 H35 N3 O10 S2
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$$\begin{array}{c} \text{Me} \\ \text{-0}_2\text{C-CH}_2 - \text{N-C} \\ \text{Me} \\ \text{O} \\ \text{Me} \\ \text{Me} \\ \text{NH- (CH}_2)_3 - \text{SO}_3\text{H} \\ \end{array}$$

CM 2

CRN 121-44-8 CMF C6 H15 N

Et | | Et-N-Et

 $\begin{array}{ccc} \text{IT} & \underline{958868-14-9P} & \underline{958868-18-3P} & \underline{958868-24-1P} \\ \hline \end{array}$ 

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(manufacture of rhodamine fluorescent dye compds. and use in biomol.

staining or labeling)

RN 958868-14-9 CAPLUS

CN Xanthylium, 9-[2-[[[2-(1,1-dimethylethoxy)-2-oxoethyl]methylamino]carbonyl]phenyl]-2,7-dimethyl-3,6-bis[(3-sulfopropyl)amino]-, inner salt, compd. with N,N-diethylethanamine (1:1) (CA INDEX NAME)

CM 1

CRN 958868-13-8

CMF C35 H43 N3 O10 S2

CRN 121-44-8 CMF C6 H15 N

RN 958868-18-3 CAPLUS

CN Xanthylium, 9-[2-[[(3-carboxypropyl)methylamino]carbonyl]phenyl]-2,7-dimethyl-3,6-bis[(3-sulfopropyl)amino]-, inner salt, compd. with N,N-diethylethanamine (1:1) (CA INDEX NAME)

CM 1

CRN 958868-17-2 CMF C33 H39 N3 010 S2

CM 2

CRN 121-44-8 CMF C6 H15 N

Et | | Et-N-Et

RN 958868-24-1 CAPLUS

CN Pyrano[3,2-g:5,6-g']diquinolin-13-ium, 6-[2-[[(3-carboxypropyl)methylamino]carbonyl]phenyl]-1,2,3,4,8,9,10,11-octahydro-1,11-bis(3-sulfopropyl)-, inner salt, compd. with N,N-diethylethanamine (1:1) (CA INDEX NAME)

CM 1

CRN 958868-23-0 CMF C37 H43 N3 010 S2

CM 2

CRN 121-44-8 CMF C6 H15 N

$$\begin{array}{c} \text{Et} \\ | \\ \text{Et-N-Et} \end{array}$$

RN 958868-84-3 CAPLUS

CN Poly(oxy-1, 2-ethanediy1),  $\alpha$ -[3-[[2-[[3-[2-azido-2-[2-(carboxymethoxy)ethoxy]ethoxy]benzoy1]amino]ethy1]amino]-3-oxopropy1]-  $\omega$ -[2-[[4-[[2-[3,6-bis(ethylamino)-4,5-disulfoxanthylium-9-y1]benzoy1]methylamino]-1-oxobuty1]amino]ethoxy]-, inner salt, compd. with N, N-diethylethanamine (1:1) (CA INDEX NAME)

CM 1

CRN 924660-21-9

CMF (C2 H4 0) n C49 H59 N9 O17 S2

CCI PMS

PAGE 1-B

$$- CH_{2} - NH - C - (CH_{2})_{3} - N - CH_{2} - CH_{2}$$

EtNH-

PAGE 1-C

2 CM

CRN 121-44-8 C6 H15 N CMF

924660-22-0P ΙT 958868-83-2P

> RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(probe synthesis; manufacture of rhodamine fluorescent dye compds. and use in biomol. staining or labeling)

924660-22-0 CAPLUS RN

Poly(oxy-1, 2-ethanediy1),  $\alpha-[3-[[2-[[3-[2-[2-[2-[3-[2-amino-7-[3-0-1]]]]]]]])$ CN (azidomethy1)-2-deoxy-5-0-[hydroxy[[hydroxy(phosphonooxy)phosphiny1]oxy]phosphiny1]-β-D-erythro-

pentofuranosyl]-4,7-dihydro-4-oxo-3H-pyrrolo[2,3-d]pyrimidin-5-yl]-2- $\begin{array}{l} propyn-1-y1] amino \\ [-2-oxoethoxy] ethoxy \\ [-2-oxoethoxy] -2-oxoethoxy \\ [-2-oxoethox] -2-oxoethoxy \\ [-$ 

[3,6-bis(ethylamino)-4,5-disulfoxanthylium-9-yl]benzoyl]methylamino]-1oxobutyl]amino]ethoxy]-, inner salt (CA INDEX NAME)

PAGE 1-B

$$\begin{array}{c|c} 0 & 0 \\ \parallel & \\ \text{C-NH-CH}_2\text{--CH}_2\text{--NH-C-CH}_2\text{--CH}_2\text{---CH}_2\text{---CH}_2\text{---CH}_2 \\ \end{array}$$

PAGE 1-C

RN 958868-83-2 CAPLUS

CN Poly(oxy-1, 2-ethanediy1),  $\alpha$ -[2-[[4-[[2-[2, 7-bis(ethylamino)-1, 8-

disulfoxanthylium-9-yl]benzoyl]methylamino]-1-oxobutyl]amino]ethyl]-  $\omega$ -(2-carboxyethoxy)-, inner salt, compd. with N, N-diethylethanamine (1:1) (CA INDEX NAME)

CM 1

CRN 924660-20-8

CMF (C2 H4 0) n C34 H40 N4 O12 S2

CCI PMS

PAGE 1-A

EtNH

PAGE 1-B

CM = 2

CRN 121-44-8

CMF C6 H15 N

#### IT 958868-75-2P

RL: ARG (Analytical reagent use); IMF (Industrial manufacture); ANST (Analytical study); PREP (Preparation); USES (Uses) (probe; manufacture of rhodamine fluorescent dye compds. and use in biomol.

staining or labeling)

RN 958868-75-2 CAPLUS

Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium, CN

6-[2-[[[4-[[2-[[3-[2-azido-2-[2-

(carboxymethoxy)ethoxy]ethoxy]benzoy1]amino]ethy1]amino]-4oxobuty1]methy1amino]carbony1]pheny1]-1, 2, 3, 4, 8, 9, 10, 11-octahydro-1, 11bis(3-sulfopropyl)-, inner salt (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

IT 958868-76-3P

RL: ARU (Analytical role, unclassified); IMF (Industrial manufacture);

ANST (Analytical study); PREP (Preparation)

(probe; manufacture of rhodamine fluorescent dye compds. and use in biomol. staining or labeling)

RN

958868-76-3 CAPLUS Pyrano[3, 2-g:5, 6-g']diquinolin-13-ium, CN 6 - [2 - [[4 - [[2 - [[3 - [2 - azido - 2 - [2 - [2 - [[3 - [1 - [3 - 0 - (azidomethyl) - 2 - deoxy - 5 - 0 - (azidomethyl) - 2 - deoxy - 5 - 0 - (azidomethyl)]][hydroxy[[hydroxy(phosphonooxy)phosphiny1]oxy]phosphiny1]-β-D-erythropentofuranosy1]-1, 2, 3, 4-tetrahydro-2, 4-dioxo-5-pyrimidiny1]-2-propyn-1y1]amino]-2-oxoethoxy]ethoxy]ethoxy]benzoy1]amino]ethy1]amino]-4oxobuty1]methy1amino]carbony1]pheny1]-1, 2, 3, 4, 8, 9, 10, 11-octahydro-1, 11bis(3-sulfopropyl)-, inner salt (CA INDEX NAME)

Absolute stereochemistry.

# PAGE 1-B

# PAGE 1-C

$$\begin{array}{c|c} 0 & OH & OPO3H2 \\ \hline R & R & O & OH \\ \hline S & O & N3 \end{array}$$

```
ANSWER 7 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
L6
     2007:198977
                  CAPLUS
AN
     146:229558
DN
ΤI
     Preparation and quenching effect of fluorescent labeled dye-containing
     modified nucleosides and nucleotides and uses thereof
IN
     Liu, Xiaohai; Milton, John
     Solexa Limited, UK
PA
S0
     PCT Int. Appl., 51pp.
     CODEN: PIXXD2
     Patent
DT
LA
     English
FAN. CNT 1
     PATENT NO.
                           KIND
                                  DATE
                                               APPLICATION NO.
                                                                         DATE
PΙ
     WO 2007020457
                            A2
                                   20070222
                                                WO 2006-GB3095
                                                                         20060818
     WO 2007020457
                                   20071025
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                      MD, RU,
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                                                US 2006-494279
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                                   20070222
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     US 7592435
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     EP 1926829
                            A2
                                   20080604
                                               EP 2006-779167
                                                                         20060818
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              AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE,
              IS, IT, LI, LT, LU, LV, MC,
                                            NL, PL, PT, RO, SE, SI, SK,
                                   20050819
PRAI GB 2005-17097
                            A
     WO 2006-GB3095
                            W
                                   20060818
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
0S
     CASREACT 146:229558
GI
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AB Modified guanine-containing nucleosides and nucleotides, in particular fluorescent labeled guanine-containing nucleosides and nucleotides, which exhibit reduced quenching effects, and hence enhanced brightness of the fluorophore are described. Thus, nucleotide I [X = -CH2CH2NHCOCH2CH2(OCH2CH2)110CH2CH2-] was prepared and tested for incorporation into a polynucleotide by phosphodiester linkage of each resp. nucleotide to the 3' end of a DNA strand, the precise sequence of which is not of relevance. The fluorescent intensity of the dye in each of the modified nucleotides was then measured, both before and after treatment with tris(2-carboxyethyl) phosphine.

IT 924660-22-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and quenching effect of fluorescent labeled dye-containing modified nucleosides and nucleotides and uses thereof)

Ι

RN 924660-22-0 CAPLUS

CN Poly(oxy-1, 2-ethanediy1),  $\alpha-[3-[[2-[[3-[2-[2-[2-[3-[2-amino-7-[3-0-(azidomethy1)-2-deoxy-5-0-[bydrovy(phosphonoxy)phosphiny1]-yv]]phosphiny1]-8-D-oxythr$ 

[hydroxy[[hydroxy(phosphonooxy)phosphiny1]oxy]phosphiny1]- $\beta$ -D-erythropentofuranosy1]-4,7-dihydro-4-oxo-3H-pyrro1o[2,3-d]pyrimidin-5-y1]-2-propyn-1-y1]amino]-2-oxoethoxy]ethoxy]-2-azidoethoxy]benzoy1]amino]ethy1]amino]-3-oxopropy1]- $\omega$ -[2-[[4-[[2-[3,6-bis(ethy1amino)-4,5-disulfoxanthy1ium-9-y1]benzoy1]methy1amino]-1-oxobuty1]amino]ethoxy]-, inner salt (CA INDEX NAME)

PAGE 1-B

$$\begin{array}{c|c} 0 & 0 \\ \hline \\ C- \text{NH- CH}_2- \text{CH}_2- \text{NH- C- CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2 \\ \hline \end{array} \\ \begin{array}{c|c} 0 & - \text{CH}_2- \text{CH}_2-$$

PAGE 1-C

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation and quenching effect of fluorescent labeled dye-containing modified nucleosides and nucleotides and uses thereof)

RN 924660-19-5 CAPLUS

CN Xanthylium, 9-[2-[[[4-[(2,5-dioxo-1-pyrrolidinyl)oxy]-4-oxobutyl]methylamino]carbonyl]phenyl]-3,6-bis(ethylamino)-4,5-disulfo-,inner salt (CA INDEX NAME)

IT 924660-20-8P 924660-21-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT

(Reactant or reagent)

(preparation and quenching effect of fluorescent labeled dye-containing modified nucleosides and nucleotides and uses thereof)

RN 924660-20-8 CAPLUS

CN Poly(oxy-1, 2-ethanediy1),  $\alpha$ -[2-[[4-[[2-[3,6-bis(ethylamino)-4,5-disulfoxanthylium-9-y1]benzoy1]methylamino]-1-oxobuty1]amino]ethy1]- $\omega$ -(2-carboxyethoxy)-, inner salt (CA INDEX NAME)

PAGE 1-A

EtNH

PAGE 1-B

RN 924660-21-9 CAPLUS

CN Poly(oxy-1, 2-ethanediy1),  $\alpha$ -[3-[[2-[[3-[2-azido-2-[2-(carboxymethoxy)ethoxy]ethoxy]benzoy1]amino]ethy1]amino]-3-oxopropy1]-  $\omega$ -[2-[[4-[[2-[3,6-bis(ethylamino)-4,5-disulfoxanthylium-9-y1]benzoy1]methylamino]-1-oxobuty1]amino]ethoxy]-, inner salt (CA INDEX NAME)

PAGE 1-B

$$- CH_{2} - NH - C - (CH_{2})_{3} - N - CH_{2} - CH_{2}$$

EtNH

PAGE 1-C

OSC. G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

L6 ANSWER 8 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN

AN 2007:117852 CAPLUS

DN 146:212209

TI Hair dye composition for dyeing of keratin fibers comprising an amidoxanthene direct dye

IN Lagrange, Alain

PA L'Oreal, Fr.

SO Fr. Demande, 74pp. CODEN: FRXXBL

DT Patent

LA French

FAN. CNT 1

FAN. CNT T									
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE					
PI FR 2889060	A1	20070202	FR 2005-52408	20050801					
FR 2889060	B1	20090515							
PRAI FR 2005-52408		20050801							
00 3115515 110 010000									

OS MARPAT 146:212209

AB A hair dye composition for dyeing of keratinous fibers, in particular of human keratinous fibers and, more particularly hair, contains an amidoxanthene direct dye. A hair dye composition contained [6-[bis-(2-hydroxy-ethyl)-amino]-9-(2-dipropylcarbamoyl-phenyl)-xanthen-3-ylidene]-bis-(2-hydroxy-ethyl)- ammonium 0.125, alkyl polyglucoside 3, PEG-8 6, benzyl alc. 4, hydroxyethyl cellulose 0.72, buffer pH = 9 50, and water q.s. 100 g. The composition gives a strong red color to the hair.

IT <u>173423-39-7</u>

RL: COS (Cosmetic use); BIOL (Biological study); USES (Uses) (hair dye composition for dyeing keratin fibers comprising amidoxanthene direct dye)

RN 173423-39-7 CAPLUS

CN Xanthylium, 3,6-bis(diethylamino)-9-[2-[[(3-sulfophenyl)amino]carbonyl]phenyl]-, chloride (1:1) (CA INDEX NAME)

● C1 -

RE. CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L6
     ANSWER 9 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
     2005:1004902 CAPLUS
AN
DN
     143:262496
ΤI
     Specific substrates for 06- alkylguanine-DNA alkyltransferase
     Jaccard, Hughes; Johnsson, Kai; Kindermann, Maik; Sielaff, India Christina
IN
PA
     EPFL Ecole Polytechnique Federale De Lausanne, Switz.
S0
     PCT Int. Appl., 78 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN. CNT 1
     PATENT NO.
                          KIND
                                 DATE
                                              APPLICATION NO.
                                                                      DATE
PΙ
                                  20050915
     WO 2005085470
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                                              WO 2005-EP50900
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                           A9
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              IS, IT, LI, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR
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                                  20071018
                                              US 2006-591162
                           A1
                                                                      20061003
PRAI EP 2004-405124
                                  20040302
                           Α
     WO 2005-EP50900
                                 20050301
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
0S
     MARPAT 143:262496
AB
     The invention relates to substrates for 06-alkylguanine-DNA
     alkyltransferases (AGT) of formula R1-A-X-CH2-R3-R4-L1 (A = a group
     recognized by AGT as a substrate; X = 0, S; R1 = -R2-L2, R5; R2, R4 =
     linker; R3 = aromatic or heteroarom. group, (substituted) unsatd. alkyl,
     cycloalkyl or heterocyclyl group with the double bond connected to CH2; R5
     = arylmethyl, heteroarylmethyl, (substituted) cycloalkyl, cycloalkenyl or
     heterocyclyl group; L1 = label, plurality of same or different labels,
     bond connecting R4 to A forming a cyclic substrate, further group
     -R3-CH2-X-A-R1; L2 = label, plurality of same or different labels).
     invention further relates to methods of transferring a label from these
     substrates to AGT and AGT fusion proteins.
IT
     1026870-98-3
                       1067188-77-5
                                         1067188-95-7
     RL: PRPH (Prophetic)
         (Specific substrates for O6- alkylguanine-DNA alkyltransferase)
RN
     1026870-98-3 CAPLUS
     INDEX NAME NOT YET ASSIGNED
CN
```

Double bond geometry as shown.

RN 1067188-77-5 CAPLUS CN INDEX NAME NOT YET ASSIGNED

PAGE 1-B

RN 1067188-95-7 CAPLUS

CN INDEX NAME NOT YET ASSIGNED

IT 863772-06-9P 863772-14-9P 863772-20-7P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (specific substrates for O6- alkylguanine-DNA alkyltransferase)

RN 863772-06-9 CAPLUS

CN Xanthylium, 3,6-diamino-9-[2-[[[4-[[[4-[[[4-[[[2-amino-9-[3-[[4-[2-[4-(dimethylamino)phenyl]diazenyl]benzoyl]amino]propyl]-9H-purin-6-yl]oxy]methyl]phenyl]methyl]amino]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

PAGE 2-A

- RN 863772-14-9 CAPLUS
- CN Xanthylium, 3,6-diamino-9-[2-[[[4-[[[4-[[[2-amino-8-[3-[[4-[2-[4-(dimethylamino)phenyl]diazenyl]benzoyl]amino]propyl]-9H-purin-6-yl]oxy]methyl]phenyl]methyl]amino]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

PAGE 1-B

$$- \text{ NH- C- (CH2)} \\ 3 - \text{ N- C} \\ \\ \text{H2N} \\ \\ \text{SO3H} \\ \text{SO3}^- \\ \\ \text{NH2}$$

RN 863772-20-7 CAPLUS

CN L-Cysteine, L-tyrosyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-S-[1-[2-[3-[2-amino-6-[4-[[4-[[2-(3,6-diamino-4,5-disulfoxanthylium-9-yl)benzoyl]methylamino]-1-oxobutyl]amino]methyl]phenyl]methoxy]-1H-purin-8-yl]propyl]amino]-2-oxoethyl]-2,5-dioxo-3-pyrrolidinyl]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

### PAGE 1-B

### PAGE 1-C

IT 863772-22-9 863772-24-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(specific substrates for 06- alkylguanine-DNA alkyltransferase)

RN 863772-22-9 CAPLUS

CN Xanthylium, 3,6-diamino-9-[2-[[[4-[(2,5-dioxo-1-pyrrolidinyl)oxy]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

RN 863772-24-1 CAPLUS

CN Xanthylium, 3,6-diamino-9-[2-[[[4-[[[4-[[[2-amino-8-[3-[[2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)acety1]amino]propy1]-9H-purin-6-yl]oxy]methyl]phenyl]methyl]amino]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

PAGE 1-B

IT 863772-19-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(specific substrates for 06- alkylguanine-DNA alkyltransferase)

RN 863772-19-4 CAPLUS

CN Xanthylium, 3,6-diamino-9-[2-[[[4-[[[4-[[[4-[[[2-amino-8-[3-[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-9H-purin-6-y1]oxy]methyl]phenyl]methyl]amino]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

OSC. G 2
RE. CNT 9
THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L6 ANSWER 10 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
- AN 2005:921498 CAPLUS
- DN 143:362484
- TI Clear Evidence of Fluorescence Resonance Energy Transfer in Gas-Phase Ions
- AU Dashtiev, Maxim; Azov, Vladimir; Frankevich, Vladimir; Scharfenberg, Ludwig; Zenobi, Renato
- CS Department of Chemistry and Applied Biosciences, Swiss Federal Institute of Technology, ETH Hoenggerberg, Zurich, CH-8093, Switz.
- SO Journal of the American Society for Mass Spectrometry (2005), 16(9), 1481-1487
  - CODEN: JAMSEF; ISSN: 1044-0305
- PB Elsevier Inc.
- DT Journal
- LA English
- AB Fluorescence resonance energy transfer (FRET) is a distance-sensitive method that correlates changes in fluorescence intensity with conformational changes, for example, of biomols. in the cellular environment. Applied to the gas phase in combination with Fourier transform ion cyclotron resonance mass spectrometry, it opens up possibilities to define structural/conformational properties of mol. ions, in the absence of solvent, and without the need for purification of the sample. For successfully observing FRET in the gas phase it is important to find suitable fluorophores. In this study several fluorescent dyes were examined, and the correlation between solution-phase and gas-phase fluorescence data were studied. For the first time, FRET in the gas phase is demonstrated unambiguously.
- IT 866474-20-6 866474-22-8

RL: BUU (Biological use, unclassified); PRP (Properties); BIOL (Biological study); USES (Uses)

(clear evidence of fluorescence resonance energy transfer in gas-phase ions in relation to coupled mass spectrometry and biomol. conformational properties)

- RN 866474-20-6 CAPLUS
- CN Xanthylium, 9-[2-[[[5-[[[4-[3,6-bis(diethylamino)-2,7-dimethylxanthylium-9-y1]-3-sulfophenyl]sulfonyl]amino]pentyl]amino]carbonyl]phenyl]-3,6-bis(ethylamino)-2,7-dimethyl-, inner salt (CA INDEX NAME)

- RN 866474-22-8 CAPLUS
- CN Xanthylium, 9-[2-[[[4-[[[4-[3,6-bis(diethylamino)-2,7-dimethylxanthylium-9-y1]-3-sulfophenyl]sulfonyl]amino]methyl]phenyl]methyl]amino]carbonyl]phenyl]-3,6-bis(ethylamino)-2,7-dimethyl-, inner salt (CA INDEX NAME)

$$\begin{array}{c} 0 \\ \text{C} \\ \text{C} \\ \text{NHEt} \end{array}$$

PAGE 1-B

\_\_ Me

─NEt2

OSC. G 5
RE. CNT 29
THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)
THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L6 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
```

AN 2003:771718 CAPLUS

DN 139:299161

TI Methine dye and silver halide photographic material containing the same to improve sensitivity

IN Takizawa, Hiroo

PA Fuji Photo Film Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 38 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 2003280130	A 1	20031002	JP 2002-81018	20020322
US 20030198906 US 6750003	A1 B2	20031023 20040615	US 2003-391757	20030320
PRAI JP 2002-81018 ASSIGNMENT HISTORY FOR I	A US DATEN	20020322	TN I CUC DICDLAY DODMAT	
OS MARPAT 139:299161	US PAIEN	NI AVAILADLE	IN LOUS DISPLAY FURMAT	
GI				

#### \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

The invention relates to a silver halide photog. material containing a methine dye represented by I (X3 = 0, S; R11 = 0M, SM, NR20R21; R12 = 0, S, N+R22R23; M = proton, cation; R20-23 = H, alkyl, alkenyl, aryl, heterocyclyl; R13-19 = H, substituent; G1, G2 = alkylene, alkenylene, arylene; A1 = 0, S, S02, NR3, C00, C0NR4, S02NR5; R3-5 = H, alkyl, alkenyl, aryl, heterocyclyl; t1 = 1-10; X1, X2 = 0, S, NR6, CR7R8; R6-8 = H, alkyl, alkenyl, aryl, heterocyclyl; R1, R2 = H, alkyl, alkenyl, aryl, heterocyclyl; M1-3 = methine; n1 = 0-3; V1, V2 = substituent; n2, n3 = 0-4; CI = counter ion; y = number; G1 is connecting to either R1 or V1; G2 is connecting to either R11, R12, R13, R14, R15, R16, R17, R18, or R19) in a photog. emulsion layer.

RL: MOA (Modifier or additive use); USES (Uses) (new methine spectral sensitizing dye in photog. material to improve sensitivity)

RN 608134-88-9 CAPLUS

CN Benzoxazolium, 5-(4-bromophenyl)-2-[2-[[5-(4-bromophenyl)-3-[6-[[3-[[2-(6-hydroxy-2,4,5,7-tetraiodo-3-oxo-3H-xanthen-9-yl)benzoyl]amino]propyl]amino]-6-oxohexyl]-2(3H)-benzoxazolylidene]methyl]-1-buten-1-yl]-3-(2-sulfoethyl)-, inner salt, sodium salt (1:1) (CA INDEX NAME)

Na

RN 608134-89-0 CAPLUS

CN Benzoxazolium, 2-[2-[[3-[6-oxo-6-[[2-[[2,3,4,5-tetrachloro-6-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-yl)benzoyl]amino]ethyl]amino]hexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, sodium salt (1:1) (CA INDEX NAME)

PAGE 1-A

Ph 
$$CH = C - CH = C$$

Na

PAGE 1-B

\_\_Br

 $\approx 0$ 

RN 608134-90-3 CAPLUS

CN Benzoxazolium, 2-[2-[[3-[13-oxo-13-[2,3,4,5-tetrachloro-6-(6-hydroxy-2,4,5,7-tetraiodo-3-oxo-3H-xanthen-9-yl)phenyl]-3,6,9-trioxa-12-azatridec-1-yl]-2(3H)-benzothiazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(3-sulfopropyl)-, inner salt, sodium salt (1:1) (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

Na

RN 608134-92-5 CAPLUS

CN Benzoxazolium, 2-[2-[[3-[6-oxo-6-[[2-[[5-su1fo-2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-y1)benzoy1]amino]ethy1]amino]hexy1]-5-pheny1-2(3H)-benzoxazolylidene]methy1]-1-buten-1-y1]-5-pheny1-3-(2-sulfoethy1)-, inner salt, sodium salt (1:2) (CA INDEX NAME)

•2 Na

RN 608134-93-6 CAPLUS

CN Benzoxazolium, 5-(4-bromopheny1)-2-[2-[[5-(4-bromopheny1)-3-[13-oxo-13-[2,3,4,5-tetrachloro-6-(6-hydroxy-3-oxo-2,7-disulfo-3H-xanthen-9-y1)pheny1]-3,6,9-trioxa-12-azatridec-1-y1]-2(3H)-benzoxazolylidene]methy1]-1-buten-1-y1]-3-(2-sulfoethy1)-, inner salt, sodium salt (1:3) (CA INDEX NAME)

PAGE 2-A

•3 Na

RN 608134-94-7 CAPLUS

CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-[3,6-bis(diethylamino)xanthylium-9-yl]benzoyl]amino]ethyl]amino]-6-oxohexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, chloride (9CI) (CA INDEX NAME)

Ph 
$$CH = C - CH = 0$$
 $CH = C - CH = 0$ 
 $CH_2 - CH_2 - CH_$ 

● C1<sup>-</sup>

PAGE 1-B

-NEt2

RN 608134-95-8 CAPLUS

CN Benzoxazolium, 2-[2-[[3-[13-[2-[3,6-bis(diethylamino)xanthylium-9-y1]phenyl]-13-oxo-3,6,9-trioxa-12-azatridec-1-y1]-2(3H)-benzothiazolylidene]methyl]-1-butenyl]-5-phenyl-3-(3-sulfopropyl)-, inner salt, chloride (9CI) (CA INDEX NAME)

PAGE 2-A

● C1<sup>-</sup>

RN 608134-96-9 CAPLUS

CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-[3,6-bis(ethylamino)-2,7-dimethylxanthylium-9-y1]benzoy1]amino]ethyl]amino]-6-oxohexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-butenyl]-5-phenyl-3-(2-sulfoethyl)-, inner salt, chloride (9CI) (CA INDEX NAME)

Ph 
$$CH = C - CH = C$$

● C1<sup>-</sup>

PAGE 1-B

 $- \mathtt{NHEt}$ 

608134-97-0 CAPLUS

RN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-[3,6-bis(diethylamino)xanthylium-9-y1]-5-sulfobenzoy1]amino]ethyl]amino]-6-oxohexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(3-sulfopropyl)-, CNbis(inner salt) (CA INDEX NAME)

PAGE 1-B

-NEt2

RN 608134-98-1 CAPLUS

CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-(6-hydroxy-2,4,5,7-tetraiodo-3-oxo-3H-xanthen-9-y1)-5-sulfobenzoy1]amino]ethy1]amino]-6-oxohexy1]-5-pheny1-2(3H)-benzoxazolylidene]methy1]-1-buten-1-y1]-5-pheny1-3-(2-sulfoethy1)-, inner salt, sodium salt (1:2) (CA INDEX NAME)

●2 Na

RN 608134-99-2 CAPLUS

CN Benzoxazolium, 2-[2-[[3-[6-[[2-[[2-[3,6-bis(ethylamino)xanthylium-9-yl]-5-sulfobenzoyl]amino]ethyl]amino]-6-oxohexyl]-5-phenyl-2(3H)-benzoxazolylidene]methyl]-1-buten-1-yl]-5-phenyl-3-(2-sulfoethyl)-, bis(inner salt) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

# ─NHEt

IT 608134-87-8P

RL: MOA (Modifier or additive use); SPN (Synthetic preparation); PREP (Preparation); USES (Uses)

(preparation of new methine spectral sensitizing dye for photog. material to

improve sensitivity)

RN 608134-87-8 CAPLUS

CN Benzoxazolium, 2-[2-[[3-[6-oxo-6-[[2-[[2-(2,4,5,7-tetrabromo-6-hydroxy-3-oxo-3H-xanthen-9-y1)benzoy1]amino]ethy1]amino]hexy1]-5-pheny1-2(3H)-benzoxazolylidene]methy1]-1-buten-1-y1]-5-pheny1-3-(2-sulfoethy1)-, inner salt, sodium salt (1:1) (CA INDEX NAME)

- L6 ANSWER 12 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
- AN 1999:220855 CAPLUS
- DN 131:951
- TI Regulation of lateral mobility and cellular trafficking of the CCK receptor by a partial agonist
- AU Roettger, Belinda F.; Pinon, Delia I.; Burghardt, Thomas P.; Miller, Laurence J.
- CS Center for Basic Research in Digestive Diseases and Department of Biochemistry and Molecular Biology, Mayo Clinic and Foundation, Rochester, MN, 55905, USA
- SO American Journal of Physiology (1999), 276(3, Pt. 1), C539-C547 CODEN: AJPHAP; ISSN: 0002-9513
- PB American Physiological Society
- DT Journal
- LA English
- AB Partial agonists are effective tools for advancing development of highly selective drugs and providing insights into mol. regulation of cellular Here, we explore the impact of a partial agonist on key aspects of cholecystokinin (CCK) receptor regulation, its lateral mobility and cellular trafficking, in native pancreatic acinar cells and Chinese hamster ovary cells expressing CCK receptor (CHO-CCKR). We developed and characterized a novel fluorescent partial agonist, rhodamine-Gly-[(Nle28, 31)CCK-26-32]-phenethyl ester, that binds specifically and with high affinity to CCK receptors. Such analogs are fully efficacious pancreatic acinar cell secretagogues without supramaximal inhibition that mobilize intracellular calcium with little or no increase in phospholipase C (PLC) activity. Despite minimal phosphorylation of CCK receptors in response to this partial agonist, receptor trafficking was the same as that observed with full agonist (CCK). This included normal internalization via clathrin-dependent endocytosis in CHO-CCKR cells and insulation on the surface of pancreatic acinar cells. Also, as with CCK-occupied receptor, fluorescence recovery after photobleaching of partial agonist-occupied receptor on the acinar cell surface demonstrated a marked temperature-dependent slowing of its rate of This was similarly associated with resistance to acid-induced diffusion. dissociation of ligand. Thus some key mol. regulatory mechanisms for CCK receptor internalization and insulation may be initiated by cellular signaling cascades that are not dependent on PLC activation or receptor phosphorylation.
- IT 225644-35-9
  - RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); BIOL (Biological study)
    - (cholecystokinin receptor lateral mobility and cellular trafficking regulation by partial agonist and mechanisms therein)
- RN 225644-35-9 CAPLUS
- CN L-Phenylalanine, N-[2-[3,6-bis(dimethylamino)xanthylium-9-yl]benzoyl]glycyl-L-α-aspartyl-0-sulfo-L-tyrosyl-L-norleucylglycyl-L-tryptophyl-L-norleucyl-L-α-aspartyl-, inner salt, 9-(2-phenylethyl) ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.

Me2N

PAGE 1-B

OSC. G 11 THERE ARE 11 CAPLUS RECORDS THAT CITE THIS RECORD (11 CITINGS)
RE. CNT 41 THERE ARE 41 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 13 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN
L6
     1997:617502 CAPLUS
AN
     127:249520
DN
OREF 127:48749a, 48752a
     Ink-jet inks providing lightfast magenta images with good reproducibility
ΤI
     Onodera, Akira; Oya, Hidenobu; Ninomya, Hidetaka; Ishibashi, Daisuke;
IN
     Morimoto, Hitoshi
     Konica Co., Japan
Jpn. Kokai Tokkyo Koho, 36 pp.
PA
S0
     CODEN: JKXXAF
DT
     Patent
LA
     Japanese
FAN. CNT 1
     PATENT NO.
                           KIND
                                  DATE
                                               APPLICATION NO.
                                                                        DATE
     JP 09241558
PΙ
                           Α
                                  19970916
                                               JP 1996-57369
                                                                        19960314
PRAI JP 1996-57369
                                  19960314
     MARPAT 127:249520
GΙ
```

- \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT \*
- The title inks contain I or II (R1, R2 = H, alkyl, alkenyl, alkynyl, aralkyl; R3, R9 = H, alkyl, alkenyl, alkynyl, aralkyl, aromatic or heterocyclic group, or R3R1, R9R7 = N-heterocycle member; R4, R5, R10, R11 = halogen, alkyl, alkoxy, alkenyloxy, alkynyloxy, aralkyloxy, aromatic oxy, heterocyclic oxy, acylamino, sulfonylamino, ureido, urethane, alkoxycarbonyl, carbamoyl, sulfamoyl, sulfonyl, acyl, amino, cyano, OH, sulfo, carboxy; p, q = 0-4; R6, R12 = sulfo, carboxy, sulfamoyl, carbamoyl, alkoxycarbonyl; A1, A2 = counter ion or none in the case of inner salt; X = C1, Br, I; R7, R8 = H, alkyl, alkenyl, alkynyl, aralkyl; m = 0-3; n = 0-4), e.g., I (p = q = 0; R1 = R3 = CH2CO2H; R2 H; R6 = SO3-).

  IT 195260-64-1 195260-88-9

RL: TEM (Technical or engineered material use); USES (Uses) (dye; ink-jet inks providing lightfast magenta images with good reproducibility)

RN 195260-64-1 CAPLUS

CN Xanthylium, 9-[2-[(butylamino)carbonyl]phenyl]-3-[(2-fluorophenyl)amino]-6-[(8-sulfo-1-naphthalenyl)amino]-, methyl sulfate (1:1) (CA INDEX NAME)

CM 1

CRN 195260-63-0 CMF C40 H33 F N3 05 S

CM 2

CRN 21228-90-0 CMF C H3 O4 S

Me-0-S03-

RN 195260-88-9 CAPLUS

CN Xanthylium, 9-[2-[(butylamino)carbonyl]phenyl]-3-[(2-chlorophenyl)amino]-6-[(2-methoxy-5-sulfophenyl)amino]-, methyl sulfate, sodium salt (1:1:1) (CA INDEX NAME)

CM 1

CRN 198821-70-4

CMF C37 H33 C1 N3 O6 S . C H3 O4 S

CM 2

CRN 195260-87-8

CMF C37 H33 C1 N3 O6 S

CM 3

CRN 21228-90-0 CMF C H3 04 S

 $Me-0-S03^-$ 

OSC. G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

ANSWER 14 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN L6

AN 1997:515357 CAPLUS

DN 127:123082

OREF 127:23723a, 23726a

ΤI Jet recording inks and pigments

Onodera, Akira; Ninomya, Hidetaka; Oya, Hidenobu; Ishibashi, Daisuke; IN Morimoto, Hitoshi

PA

Konica Co., Japan Jpn. Kokai Tokkyo Koho, 18 pp. S0

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNI I								
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE			
PΙ	JP 09157562	A	19970617	JP 1995-316691	19951205			
	JP 3557759	В2	20040825					
PRAI	JP 1995-316691		19951205					
OS	MARPAT 127:123082							
GI								

AB Magenta-colored inks for color images with good light resistance and color reproducibility contain pigments I (R1, R2 = H, alkyl, alkenyl, alkynyl, aralkyl; R3 = H, alkyl, alkenyl, alkynyl, aralkyl, aromatic group, heterocycle, R3 and R1 can form a ring with N; R4 = alkyl, alkenyl, alkynyl, aralkyl, aromatic group, heterocycle; R5 = sulfo, carboxy, sulfamoyl, carbamoyl, alkoxycarbonyl; R6, R7 = halogen, alkyl, alkoxy, alkenyloxy, alkynyloxy, aralkyloxy, aromatic oxy, heterocyclic oxy, acylamino, sulfonylamino, ureido, urethane, alkoxycarbonyl, carbamoyl, sulfamoyl, sulfonyl, acyl, amino, cyano, hydroxy, sulfo, carbonyl; p, q = 0-4, Xn = anion).

Ι

192720-29-9 IT

> RL: TEM (Technical or engineered material use); USES (Uses) (jet recording inks and pigments)

RN 192720-29-9 CAPLUS

CN Xanthylium, 9-[2-[(butylamino)carbonyl]phenyl]-3-[(2-carboxyphenyl)amino]-6-[[2-(2-propyn-1-yloxy)-5-sulfophenyl]amino]-, methanesulfonate, sodium salt (1:1:1) (CA INDEX NAME)

CM1 CRN 192720-28-8 CMF C40 H34 N3 08 S

CM 2

CRN 16053-58-0 CMF C H3 03 S

L6 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2010 ACS on STN

AN 1996:87653 CAPLUS

DN 124:148952

OREF 124:27661a, 27664a

TI Water-based magenta color recording liquids

IN Yamada, Masahiro; Murata, Jukichi

PA Mitsubishi Kagaku KK, Japan

SO Jpn. Kokai Tokkyo Koho, 10 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

GT

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	JP 07292303 JP 1994-91211	A	19951107 19940428	JP 1994-91211	19940428
OS	MARPAT 124:148952				

Title storage-stable liqs., useful for paper to give water-resistant printed image, contain water-based mediums and xanthene derivs. I [A = anion; R1-R4 = (un)substituted (cyclo)alkyl; R1 and R2, or R3 and R4 may form saturated heterocyclic ring with N; R5, R6 = H, C1-12 alkyl, halo; R7 = H, (un)substituted (cyclo)alkyl; R8-R13 = H, halo, C1-6 alkyl, C1-6 alkoxy, OH, NO2, carboxy, sulfonic acid; R14 = H, halo; n = 1-3]. Thus, an ink comprising I (A = C1; R1-R4 = Et; R9 = 2-CO2H; R8, R10-R14 = H) 3, diethylene glycol 10, iso-Pr alc. 3, and water to 100 parts was used in ink-jet printing on paper to give magenta image with high color d. IT 173423-39-7

RL: TEM (Technical or engineered material use); USES (Uses)

(dyes; water-based jet printing inks containing magenta xanthene-type dyes)

Ι

RN 173423-39-7 CAPLUS

CN Xanthylium, 3,6-bis(diethylamino)-9-[2-[[(3-sulfophenyl)amino]carbonyl]phenyl]-, chloride (1:1) (CA INDEX NAME)

● C1-

### => d his full

(FILE 'HOME' ENTERED AT 08:50:58 ON 04 JAN 2010)

FILE 'REGISTRY' ENTERED AT 08:51:08 ON 04 JAN 2010

STRUCTURE UPLOADED

D

L2

2 SEA SSS SAM L1

D SCA

L3

77 SEA SSS FUL L1

D QUE L3 STAT

L4

58 SEA ABB=ON PLU=ON L3 AND CAPLUS/LC

L5

19 SEA ABB=ON PLU=ON L3 NOT L4

D 1-19 IDE CAN

FILE 'CAPLUS' ENTERED AT 08:55:14 ON 04 JAN 2010 15 SEA ABB=ON PLU=ON L3 D 1-15 BIB ABS HITSTR

#### FILE HOME

L6

#### FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

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http://www.cas.org/support/stngen/stndoc/properties.html

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USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2009

CAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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http://www.cas.org/legal/infopolicy.html

This file contains CAS Registry Numbers for easy and accurate substance identification.

$$\Rightarrow$$
  $\Rightarrow$  d que 19 stat L7 STR

Structure attributes must be viewed using STN Express query preparation. L9 15 SEA FILE=REGISTRY SSS FUL L7

100. 0% PROCESSED 124 ITERATIONS SEARCH TIME: 00. 00. 01

15 ANSWERS

=> s 19 and caplus/lc 69677821 CAPLUS/LC L10 15 L9 AND CAPLUS/LC

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REVISED CLASS FIELDS (/NCL) LAST RELOADED: Oct 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Oct 2009

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'.FIONA' IS DEFAULT FORMAT FOR 'CAPLUS' FILE

=> s 19 L11 3 L9

 $\Rightarrow$  d 1-3 bib abs hitstr

```
L11
     ANSWER 1 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN
     2007:1364408 CAPLUS
AN
DN
     148:35065
ΤI
     Rhodamine fluorescent dye compounds and the use of their labeled
     con jugates
IN
     Romanov, Nikolai Nikolaevich; Barnes, Colin Lloyd
PA
     Solexa Limited, UK
S0
     PCT Int. Appl., 102 pp.
     CODEN: PIXXD2
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FAN. CNT 1
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PRAI US 2006-801270P
                          Р
                                 20060518
     WO 2007-GB1770
                          W
                                 20070516
0S
     CASREACT 148:35065; MARPAT 148:35065
     The invention relates to rhodamine dyes particularly suitable for methods
AB
     of fluorescence detection and sequencing synthesis.
                                                           The dyes and labeled
     conjugates are useful as mol. probes in a variety of applications, such as
     in assays involving staining of cells, protein binding, and anal. of
     nucleic acids, such as hybridization assays and nucleic acid sequencing.
     Thus, a rhodamine dye bearing N-propylsulfonic acid ammonium salt was
     prepared and tested.
ΙT
     958868-84-3P
     RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT
     (Reactant or reagent)
        (manufacture of rhodamine fluorescent dye compds. and use in biomol.
        staining or labeling)
RN
     958868-84-3 CAPLUS
     CN
     (carboxymethoxy)ethoxy]ethoxy]benzoy1]amino]ethy1]amino]-3-oxopropy1]-
     \omega-[2-[[4-[[2-[3,6-bis(ethylamino)-4,5-disulfoxanthylium-9-
     yl]benzoyl]methylamino]-1-oxobutyl]amino]ethoxy]-, inner salt, compd. with
     N, N-diethylethanamine (1:1) (CA INDEX NAME)
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CM

CRN

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924660-21-9

CMF (C2 H4 0)n C49 H59 N9 017 S2 CCI PMS

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## PAGE 1-C

CM 2

CRN 121-44-8

CMF C6 H15 N

IT <u>924660-22-0P</u> <u>958868-83-2P</u> RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent) (probe synthesis; manufacture of rhodamine fluorescent dye compds. and use in biomol. staining or labeling)

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CN Poly(oxy-1, 2-ethanediy1),  $\alpha$ -[3-[[2-[[3-[2-[2-[2-[3-[2-amino-7-[3-0-(azidomethy1)-2-deoxy-5-0-[hydroxy[[hydroxy(phosphonooxy)phosphiny1]oxy]phosphiny1]- $\beta$ -D-erythropentofuranosy1]-4, 7-dihydro-4-oxo-3H-pyrrolo[2, 3-d]pyrimidin-5-y1]-2-propyn-1-y1]amino]-2-oxoethoxy]ethoxy]-2-azidoethoxy]benzoy1]amino]ethy1]amino]-3-oxopropy1]- $\omega$ -[2-[[4-[[2-[3,6-bis(ethy1amino)-4,5-disulfoxanthy1ium-9-y1]benzoy1]methy1amino]-1-oxobuty1]amino]ethoxy]-, inner salt (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

PAGE 1-C

RN 958868-83-2 CAPLUS

CN Poly(oxy-1, 2-ethanediy1),  $\alpha-[2-[[4-[[2-[2,7-bis(ethylamino)-1,8-disulfoxanthylium-9-y1]benzoy1]methylamino]-1-oxobuty1]amino]ethyl]- <math>\omega-(2-carboxyethoxy)-$ , inner salt, compd. with N, N-diethylethanamine (1:1) (CA INDEX NAME)

CM 1

CRN 924660-20-8

CMF (C2 H4 0)n C34 H40 N4 O12 S2

CCI PMS

PAGE 1-A

EtNH

PAGE 1-B

CM 2

CRN 121-44-8 CMF C6 H15 N

$$\mathop{\mathtt{Et}}_{-\mathsf{N-Et}}^{\mathsf{Et}}$$

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ANSWER 2 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN
L11
     2007:198977
                  CAPLUS
AN
     146:229558
DN
ΤI
     Preparation and quenching effect of fluorescent labeled dye-containing
     modified nucleosides and nucleotides and uses thereof
IN
     Liu, Xiaohai; Milton, John
     Solexa Limited, UK
PA
S0
     PCT Int. Appl., 51pp.
     CODEN: PIXXD2
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     English
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PΙ
     WO 2007020457
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                                  20050819
PRAI GB 2005-17097
                            A
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ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
0S
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GI
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AB Modified guanine-containing nucleosides and nucleotides, in particular fluorescent labeled guanine-containing nucleosides and nucleotides, which exhibit reduced quenching effects, and hence enhanced brightness of the fluorophore are described. Thus, nucleotide I [X = -CH2CH2NHCOCH2CH2(OCH2CH2)110CH2CH2-] was prepared and tested for incorporation into a polynucleotide by phosphodiester linkage of each resp. nucleotide to the 3' end of a DNA strand, the precise sequence of which is not of relevance. The fluorescent intensity of the dye in each of the modified nucleotides was then measured, both before and after treatment with tris(2-carboxyethyl) phosphine.

IT 924660-22-0P

RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation) (preparation and quenching effect of fluorescent labeled dye-containing modified nucleosides and nucleotides and uses thereof)

Ι

RN 924660-22-0 CAPLUS

CN Poly(oxy-1, 2-ethanediy1),  $\alpha$ -[3-[[2-[[3-[2-[2-[2-[2-[3-[2-amino-7-[3-0-(azidomethy1)-2-deoxy-5-0-[hydroxy[[hydroxy(phosphonooxy)phosphiny1]oxy]phosphiny1]- $\beta$ -D-erythropentofuranosy1]-4, 7-dihydro-4-oxo-3H-pyrrolo[2, 3-d]pyrimidin-5-y1]-2-

propyn-1-yl]amino]-2-oxoethoxy]ethoxy]-2-azidoethoxy]benzoyl]amino]ethyl]amino]-3-oxopropyl]-\omega-[2-[[4-[[2-[3,6-bis(ethylamino)-4,5-disulfoxanthylium-9-yl]benzoyl]methylamino]-1-oxobutyl]amino]ethoxy]-, inner salt (CA INDEX NAME)

PAGE 1-B

$$\begin{array}{c|c} 0 & 0 \\ \hline \\ C- \text{NH- CH} \\ 2- \text{CH} \\ 2- \text{NH- CH} \\ 2- \text{CH} \\ 2- \text$$

PAGE 1-C

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation and quenching effect of fluorescent labeled dye-containing modified nucleosides and nucleotides and uses thereof)

RN 924660-19-5 CAPLUS

CN Xanthylium, 9-[2-[[[4-[(2,5-dioxo-1-pyrrolidinyl)oxy]-4-oxobutyl]methylamino]carbonyl]phenyl]-3,6-bis(ethylamino)-4,5-disulfo-,inner salt (CA INDEX NAME)

IT 924660-20-8P 924660-21-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(preparation and quenching effect of fluorescent labeled dye-containing modified nucleosides and nucleotides and uses thereof)

RN 924660-20-8 CAPLUS

CN Poly(oxy-1, 2-ethanediy1),  $\alpha$ -[2-[[4-[[2-[3,6-bis(ethylamino)-4,5-disulfoxanthylium-9-y1]benzoy1]methylamino]-1-oxobuty1]amino]ethy1]- $\omega$ -(2-carboxyethoxy)-, inner salt (CA INDEX NAME)

PAGE 1-A

EtNH

PAGE 1-B

RN 924660-21-9 CAPLUS

CN Poly(oxy-1, 2-ethanediy1),  $\alpha$ -[3-[[2-[[3-[2-azido-2-[2-(carboxymethoxy)ethoxy]ethoxy]benzoy1]amino]ethy1]amino]-3-oxopropy1]-  $\omega$ -[2-[[4-[[2-[3,6-bis(ethylamino)-4,5-disulfoxanthylium-9-y1]benzoy1]methylamino]-1-oxobuty1]amino]ethoxy]-, inner salt (CA INDEX NAME)

PAGE 1-B

$$- CH_2 - CH_2$$

EtNH

PAGE 1-C

OSC. G 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

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L11
     ANSWER 3 OF 3 CAPLUS COPYRIGHT 2010 ACS on STN
     2005:1004902 CAPLUS
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     143:262496
ΤI
     Specific substrates for 06- alkylguanine-DNA alkyltransferase
     Jaccard, Hughes; Johnsson, Kai; Kindermann, Maik; Sielaff, India Christina
IN
PA
     EPFL Ecole Polytechnique Federale De Lausanne, Switz.
S0
     PCT Int. Appl., 78 pp.
     CODEN: PIXXD2
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     WO 2005-EP50900
                                 20050301
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
0S
     MARPAT 143:262496
AB
     The invention relates to substrates for 06-alkylguanine-DNA
     alkyltransferases (AGT) of formula R1-A-X-CH2-R3-R4-L1 (A = a group
     recognized by AGT as a substrate; X = 0, S; R1 = -R2-L2, R5; R2, R4 =
     linker; R3 = aromatic or heteroarom. group, (substituted) unsatd. alkyl,
     cycloalkyl or heterocyclyl group with the double bond connected to CH2; R5
     = arylmethyl, heteroarylmethyl, (substituted) cycloalkyl, cycloalkenyl or
     heterocyclyl group; L1 = label, plurality of same or different labels,
     bond connecting R4 to A forming a cyclic substrate, further group
     -R3-CH2-X-A-R1; L2 = label, plurality of same or different labels).
     invention further relates to methods of transferring a label from these
     substrates to AGT and AGT fusion proteins.
IT
     1026870-98-3
                       1067188-77-5
                                         1067188-95-7
     RL: PRPH (Prophetic)
         (Specific substrates for O6- alkylguanine-DNA alkyltransferase)
RN
     1026870-98-3 CAPLUS
CN
     INDEX NAME NOT YET ASSIGNED
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Double bond geometry as shown.

RN 1067188-77-5 CAPLUS CN INDEX NAME NOT YET ASSIGNED

PAGE 1-B

RN 1067188-95-7 CAPLUS

CN INDEX NAME NOT YET ASSIGNED

IT 863772-06-9P 863772-14-9P 863772-20-7P
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses) (specific substrates for 06- alkylguanine-DNA alkyltransferase)

RN 863772-06-9 CAPLUS

CN Xanthylium, 3,6-diamino-9-[2-[[[4-[[[4-[[[4-[[[2-amino-9-[3-[[4-[2-[4-(dimethylamino)phenyl]diazenyl]benzoyl]amino]propyl]-9H-purin-6-yl]oxy]methyl]phenyl]methyl]amino]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

RN 863772-14-9 CAPLUS

CN Xanthylium, 3,6-diamino-9-[2-[[[4-[[[4-[[[2-amino-8-[3-[[4-[2-[4-(dimethylamino)phenyl]diazenyl]benzoyl]amino]propyl]-9H-purin-6-yl]oxy]methyl]phenyl]methyl]amino]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

PAGE 1-B

$$- \text{ NH- C- (CH2)} \\ 3 - \text{N- C} \\ \hline \\ \text{H2N} \\ \hline \\ \text{SO3H} \\ \text{SO3}^- \\ \\ \text{NH2} \\ \hline$$

RN 863772-20-7 CAPLUS

CN L-Cysteine, L-tyrosyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-L-arginyl-S-[1-[2-[[3-[2-amino-6-[[4-[[4-[[2-(3,6-diamino-4,5-disulfoxanthylium-9-yl)benzoyl]methylamino]-1-oxobutyl]amino]methyl]phenyl]methoxy]-1H-purin-8-yl]propyl]amino]-2-oxoethyl]-2,5-dioxo-3-pyrrolidinyl]-, inner salt (9CI) (CA INDEX NAME)

Absolute stereochemistry.

## PAGE 1-A

# PAGE 1-B

## PAGE 1-C

IT 863772-22-9 863772-24-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(specific substrates for 06- alkylguanine-DNA alkyltransferase)

RN 863772-22-9 CAPLUS

CN Xanthylium, 3,6-diamino-9-[2-[[[4-[(2,5-dioxo-1-pyrrolidinyl)oxy]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

RN 863772-24-1 CAPLUS

CN Xanthylium, 3,6-diamino-9-[2-[[[4-[[[4-[[[2-amino-8-[3-[[2-(2,5-dihydro-2,5-dioxo-1H-pyrrol-1-yl)acety1]amino]propy1]-9H-purin-6-yl]oxy]methyl]phenyl]methyl]amino]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

PAGE 1-B

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RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

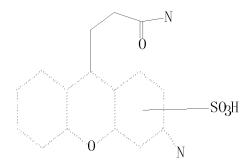
(specific substrates for 06- alkylguanine-DNA alkyltransferase)

RN 863772-19-4 CAPLUS

CN Xanthylium, 3,6-diamino-9-[2-[[[4-[[[4-[[[4-[[[2-amino-8-[3-[[(1,1-dimethylethoxy)carbonyl]amino]propyl]-9H-purin-6-y1]oxy]methyl]phenyl]methyl]amino]-4-oxobutyl]methylamino]carbonyl]phenyl]-4,5-disulfo-, inner salt (CA INDEX NAME)

OSC. G 2
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THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
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ALL CITATIONS AVAILABLE IN THE RE FORMAT

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Structure attributes must be viewed using STN Express query preparation. L13 \$ 36 SEA FILE=MARPAT SSS FUL L7  $\,$ 

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36 ANSWERS

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ANSWER 1 OF 36 MARPAT COPYRIGHT 2010 ACS on STN L13

AN 151:215172 MARPAT

ΤI Fluorogenic hydrazine-substituted compounds useful in the detection of analytes containing aldehydes and ketone groups.

Chen, Aimei; Gee, Kyle R.; Kang, Hee Chol Life Technologies Corporation, USA IN

PA

PCT Int. Appl., 103pp. S0

CODEN: PIXXD2 DT Patent

LA English

FAN. CNT 1

TAIN.	PATENT NO.				KIND DATE					APPLICATION NO. DATE								
PΙ	WO	2009	0945	36	A	1	2009	0730		W	0 20	09-U	S318	30	2009	0123		
		W:	ΑE,	AG,	AL,	AM,	AO,	AT,	AU,	AZ,	BA,	BB,	BG,	ВН,	BR,	BW,	BY,	BZ,
			CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
			FΙ,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,
			KG,	KM,	KN,	KP,	KR,	KZ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
			ME,	MG,	MK,	MN,	MW,	MX,	MY,	ΜZ,	NA,	NG,	ΝI,	NO,	NZ,	OM,	PG,	PH,
			PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	ST,	SV,	SY,	TJ,
			TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW		
		RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HR,	HU,
			IE,	IS,	ΙT,	LT,	LU,	LV,	MC,	MK,	MT,	NL,	NO,	PL,	PT,	RO,	SE,	SI,
			SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,
			TD,	TG,	BW,	GH,	GM,	KE,	LS,	MW,	MZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,
			ZW,	AM,	ΑZ,	BY,	KG,	KZ,	MD,	RU,	ΤJ,	TM						
PRAI	US	2008	-2319	91P	20	0801	24											
GI																		

Ι

II

AB The disclosure is directed to fluorogenic Schiff base-forming dyes of formula I capable of detecting analytes containing aldehyde and ketone groups. The dyes contain nucleophilic hydrazinyl appendages and are capable of binding and detecting analytes in situ. Compds. of formula I wherein X is H and an analyte; R1 and R1a are independently H and (un)substituted alkyl; R2, R4 - R10 are independently H, (un)substituted alkyl, (un)substituted alkoxy, acyl, acylamino, etc.; R3 is (un)substituted alkoxy, (un)substituted amino, (un)substituted hydrazinyl, etc.; and stereoisomers, tautomers, hydrates, solvates and salts thereof, are claimed. Example compound II was prepared by hydrolysis of bis-Boc-protected II. Compound II was tested for its fluorescent activity towards aldehyde (some data given).

# MSTR 1

Patent location: claim 1

Note: or tautomers, hydrates, solvates, or salts
Note: additional ring formation also claimed
Note: additional oxo substitution also disclosed
Note: also incorporates claim 108, structure IIIa

Stereochemistry: or stereoisomers

ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L13 ANSWER 2 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
```

AN 151:96479 MARPAT

TI Fluorescent compounds for labeling biomolecules and cells and use in kits and assays

IN Mao, Fei; Leung, Wai-Yee; Cheung, Ching-Ying; Hoover, Hye Eun

PA Biotium, Inc., USA

SO PCT Int. Appl., 157pp. CODEN: PIXXD2

DT Patent

LA English

FAN. CNT 1

1 1111.	PATENT NO.				KIND DATE APPLICATION NO. DATE												
PΙ	WO 200	90789	70	A	1	2009	0625		W	0 20	08-U	S136	98	2008	1212		
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		TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,
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	US 200	90305	410	A	1	2009	1210		U	S 20	08-3	3438	7	2008	1212		
	PRAI US 2007-13956P		20	0712	14												
GI																	

AB The present invention relates to fluorescent dyes in general. The present invention provides a wide range of fluorescent dyes and kits containing the same, which are applicable for labeling a variety of biomols., cells and microorganisms. The present invention also provides various methods of using the fluorescent dyes for research and development, forensic identification, environmental studies, diagnosis, prognosis, and/or treatment of disease conditions. Fluorescent dye I (preparation given) was conjugated with goat anti-mouse IgG and with aminophalloidin. Actin

filaments were stained with phalloidin labeled with I. I conjugate was more photostable than a conjugate with Alex Fluor 488.

# MSTR 1

$$G1 = 223$$

$$\begin{array}{c} \text{G15} & \text{G15} \\ \text{H2N} & \text{O}^{\dagger} & \text{NH2} \\ \text{G15} & \text{G15} & \text{G15} \\ \text{G15} & \text{G15} & \text{G15} \\ 226 & \text{C17} & \text{G15} \\ 224 & \text{C15} & \text{C17} & \text{C15} \\ 224 & \text{C15} & \text{C17} & \text{C15} \\ \end{array}$$

$$G2 = 201$$

$$G13 = NH2$$
  
 $G15 = 233$ 

Patent location: claim 1

Note: substitution is restricted

Note: additional derivatization also disclosed

RE. CNT 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 3 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
L13
     150:425027 MARPAT
AN
ΤI
     Amide-substituted fluorescent xanthene dyes
IN
     Lukhtanov, Eugene
PA
     Epoch Biosciences, Inc., USA
S0
     PCT Int. Appl., 84pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN. CNT 1
     PATENT NO.
                       KIND
                             DATE
                                             APPLICATION NO.
                                                               DATE
                              20090409
PΙ
     WO 2009046165
                        A1
                                             WO 2008-US78540
                                                               20081002
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             TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW,
             AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
     US 20090093612
                       A1
                             20090409
                                            US 2008-244712
                                                               20081002
PRAI US 2007-977316P
                       20071003
```

F F 
$$O - CO + CH_2 - P - O - F - F$$
  $O - CO - NEt_2$   $O$ 

GΙ

AB Amide-substituted xanthene fluorescent dyes such as I can be prepared from xanthene dyes using a phosphonylation agent (II). Thus, I was prepared by mixing 0.85 g a Br-substituted xanthene dye, 2.2 mL DMF, 1 mL N-ethylmorpholine and 1.27 g II and heating 3 h at 70° in the presence of 0.12 g tetrakis(triphenylphosphine)palladium followed by treating with pentafluorophenyl trifluoroacetate and reacting with diethylamine.

# MSTR 1

$$\begin{array}{c}
10^{640} \\
620 \\
177^{2} \\
168^{1}
\end{array}$$

$$G21 = 152$$

$$G27 = NH2$$
  
 $G39 = 200$ 

$$G40 = 265$$

Patent location: claim 1

Note: additional derivatizations also claimed

RE. CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 36 MARPAT COPYRIGHT 2010 ACS on STN

AN 150:100042 MARPAT

TI Preparation of reactive dyes as labeling reagents

IN Antoulinakis, Evan; Witczak, Diane M.; Gee, Kyle; Rukavishnikov, Aleksey

PA Invitrogen Corporation, USA

SO U.S. Pat. Appl. Publ., 53pp.

CODEN: USXXCO

DT Patent

LA English

FAN. CNT 1

PA	ATENT NO.	KIND	DATE	APPLICATION NO.	DATE		
PI US	S 20090004753	A1	20090101	US 2008-23019	20080130		
PRAI US	S 2007-887218P	20070	130				
GI							

$$\begin{array}{c} R1 \\ R? \\ 0 \\ R2 \end{array}$$

AB The present disclosure is directed to reactive esters I [wherein L = a linker; R1 and R2 = independently halo; R3 = a water solubilizing group; Ra = a reporter mol.] capable of conjugating a reporter mol. to a carrier mol. or solid support. For example, 4-(6-amino-3-imino-4,5-disulfo-3H-xanthen-9-yl)-1,3-benzenedicarboxylic acid tris(triethylamine) was reacted with 4-oxa-(potassium 3,5-dichloro-4-oxidobenzenesulfonate) tetramethyluronium hexafluorophosphate (preparation given) to give II•3Na+ (63%). In biol. test using goat anti-mouse antibody, II•3Na+ showed 8.9 labeling degree in 25 mM phosphate buffer at pH of 8.6.

#### MSTR 1

G1 = 1897

1897 - G43

G4 = 1799

G24 = phenylene (opt. substd. by 1 or more G27)

G28 = S03H

G42 = NH (opt. substd.)

Patent location: claim 1

Note: additional ring and oxo formation also claimed

Note: or tautomers or salts

Note: also incorporates claim 28, structure I and claim

53, structure IB

```
L13 ANSWER 5 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
```

AN 150:35230 MARPAT

TI Long wavelength fluorogenic intercellular ion indicators

IN Gee, Kyle; Martin, Vladmir

PA Invitrogen Corporation, USA

SO PCT Int. Appl., 80pp.

CODEN: PIXXD2

DT Patent

LA English

FAN. CNT 1

	PATENT NO.			KIND DATE					A	PPLI	CATI	ON N	0.	DATE				
PΙ	WO	2008	1513	03	A	1	2008	1211		W	0 20	08-U	S659	86	2008	0605		
		W:	ΑE,	AG,	AL,	AM,	AO,	AT,	AU,	ΑZ,	BA,	BB,	BG,	BH,	BR,	BW,	BY,	BZ,
			CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	EG,	ES,
			FΙ,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,
			KG,	KM,	KN,	KP,	KR,	KZ,	LA,	LC,	LK,	LR,	LS,	LT,	LU,	LY,	MA,	MD,
			ME,	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	ΝI,	NO,	NZ,	OM,	PG,	PH,
			PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	SV,	SY,	TJ,	TM,
			TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	ZA,	ZM,	ZW			
		RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FΙ,	FR,	GB,	GR,	HR,	HU,
			IE,	IS,	ΙΤ,	LT,	LU,	LV,	MC,	MT,	NL,	NO,	PL,	PΤ,	RO,	SE,	SI,	SK,
			TR,	BF,	BJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	NE,	SN,	TD,
												SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,
			AM,	ΑZ,	BY,	KG,	KZ,	MD,	RU,	TJ,	TM							

PRAI US 2007-942163P 20070605

AB Cell permeable metal ion indicator compds. and methods of their use and synthesis are described. The compound comprises a metal chelating moiety (Mc), a reporter mol. and two or more lipophilic groups (GL) covalently bonded through a linker to the reporter mol., wherein the lipophilic groups, when present in a live cell, are cleaved resulting in two or more neg. charged groups.

#### MSTR 1

$$G1 = 100$$

$$G2 = 10$$

$$G6 = 50$$

G9 = NH2 (opt. substd.)

G11 = 0 G15 = NH G19 = S03H

Patent location: claim 9

Note: additional ring formation also claimed Note: additional oxo formation also disclosed

Note: subbstitution is restricted

Note: and complexes with G12

Note: additional ligands also claimed

RE. CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 6 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
L13
     149:200790 MARPAT
AN
ΤI
     Preparation of sulfonamide derivatives of xanthene as fluorescent
     detection reagents
     Frank, Wilhelm G.; Wenzel, Matthias S.; Czerney, Peter T.; Desai, Surbhi;
IN
     Hermanson, Greg
     Pierce Biotechnology, Inc., USA
PA
S0
     Eur. Pat. Appl., 33 pp.
     CODEN: EPXXDW
DT
     Patent
LA
     English
FAN. CNT 1
     PATENT NO.
                      KIND
                                            APPLICATION NO.
                            DATE
                                                              DATE
PΙ
     EP 1947095
                       A1
                             20080723
                                            EP 2008-250265
                                                              20080122
             AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU,
             IE, IS, IT, LI, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI,
             SK, TR, AL, BA, MK, RS
     US 20080177086
                             20080724
                                            US 2007-625379
                                                              20070122
                      Α1
     JP 2008231093
                             20081002
                                            JP 2008-10915
                       A
                                                              20080121
PRAI US 2007-625379
                      20070122
0S
     CASREACT 149:200790
GI
```

- \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT \*
- AB Disclosed are compds. I [R11 = Q1 or Q2; R1, R2 = -H, -alkyl or -ω-sulfoalkyl; X, Y = -O-, -OH, -SH, etc.; Z = -O- or OH; U = -O-, -OH or NH-L-S02Z; L = divalent linear (-(CH2)o-), crossed, or cyclic alkane group that can be substituted by at least one atom selected from the group consisting of oxygen, substituted nitrogen and/or sulfur; o = 1-15; Kat = Li, Na, K, etc.; An = F, Cl, Br, etc.; m = 1-6 necessary to compensate the neg. or pos. charge from the dye moiety; n = 0-12] were prepared Thus, a multi-step synthesis of II·2EtN+H(iso-Pr)2 (III), starting from 5-(6)-carboxyrhodamine 110 hydrochloride, was given. It was demonstrated that compds. I are useful as fluorescent dyes in biol. assays. For example, rabbit IgG was detected at a level of 2 ng/well with the III-GAR (Goat anti-Rabbit) conjugate.

#### MSTR 1

$$G1 = 34-26 \ 37-7 \ 36-29$$

$$G2 = NH2$$
 $G5 = 49$ 

$$G25 = (0-12) \text{ CH2}$$
  
 $G26 = 196$ 

196

Patent location:

claim 1

RE. CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L13 ANSWER 7 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
```

AN 148:486047 MARPAT

TI Chemical switches for detecting reactive chemical agents

IN Walt, David R.; Bencic-Nagale, Sandra

PA Trustees of Tufts College, USA

SO PCT Int. Appl., 70pp.

CODEN: PIXXD2

DT Patent

LA English

FAN. CNT 1

1 111.	PATENT NO.			KI	ND	DATE APPLICATION NO. DATE											
PΙ	WO 2008				A2 20080 A3 20080				W	0 20	07-U	S625	 68	2007	 0222		
	W:	AE, CN, GE, KP, MK, RO,	AG, CO, GH, KR, MN, RS,	AL, CR, GM, KZ, MW, RU,	AM, CU, GT, LA, MX, SC,	AT, CZ, HN, LC, MY,	AU, DE, HR, LK, MZ, SE,	AZ, DK, HU, LR, NA, SG,	DM, ID, LS, NG, SK,	DZ, IL, LT, NI, SL,	EC, IN, LU, NO, SM,	EE, IS, LV, NZ, SV,	EG, JP, LY, OM,	BY, ES, KE, MA, PG, TJ,	FI, KG, MD, PH,	GB, KM, ME, PL,	GD, KN, MG, PT,
	RW:	AT, IS, CF, GM,	BE, IT, CG, KE,	BG, LT, CI, LS,	CH, LU, CM, MW,	CY, LV, GA,	CZ, MC, GN, NA,	DE, NL, GQ, SD,	DK, PL, GW, SL,	EE, PT, ML, SZ,	ES, RO, MR, TZ,	FI, SE, NE,	SI, SN,	GB, SK, TD, ZW,	TR, TG,	BF, BW,	ВЈ, GH,

PRAI US 2006-777014P 20060224

AB Certain embodiments of the present invention relate to the preparation of microbeads that exhibit a turn on fluorescence response within seconds of exposure to an analyte vapor (e.g., a chemical warfare agent or a reactive stimulant). This sensing approach is modeled after the mechanism for inhibition of acetylcholinesterase enzyme activity, and uses a specific and irreversible reaction between phosphonyl halides and a fluorescent indicator. The present invention also relates to a sensor and a method for sensing an analyte through detection of changes in the fluorescing properties of the inventive microbeads.

#### MSTR 1A

G1 = 0

G9 = heterocycle <containing 3 or more atoms,

1 or more heteroatoms, zero or more N, zero or more O, zero or more S, zero or more B, zero or more P, zero or more Se> (opt. substd.) / SO3H (opt. substd.) = CONH2 (opt. substd.)

G23

claim 1 Patent location: Note: or salts

```
L13 ANSWER 8 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
AN 148:9415 MARPAT
TI Antibody-label complexes and methods for antigen or ligand immunolabeling or detection, diagnosis and therapy
```

IN Beechem, Joseph; Hagen, David; Johnson, Iain

PA Molecular Probes, Inc., USA

SO U.S. Pat. Appl. Publ., 74 pp., Cont.-in-part of U.S. Ser. No. 467,550. CODEN: USXXCO

DT Patent LA English

FAN. CNT 2

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PATENT NO.
                       KIND
                              DATE
                                              APPLICATION NO.
                                                                 DATE
PΙ
     US 20070269902
                              20071122
                                              US 2003-666291
                                                                 20030917
                        A1
     US 20030073149
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                        A3
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PRAI US 2001-329068P
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                        20041012
     EP 2002-768949
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     JP 2003-533851
                       20021002
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The present invention provides labeling reagents and methods for labeling AB primary antibodies and for detecting a target in a sample using an immuno-labeled complex that comprises a target-binding antibody and one or more labeling reagents. The labeling reagents comprise monovalent antibody fragments or non-antibody monomeric proteins whereby the labeling reagents have affinity for a specific region of the target-binding antibody and are covalently attached to a label. Typically, the labeling reagent is an anti-Fc Fab or Fab' fragment that was generated by immunizing a goat or rabbit with the Fc fragment of an antibody. present invention provides for discrete subsets of labeling reagent and immuno-labeled complexes that facilitate the simultaneous detection of multiple targets in a sample wherein the immuno-labeled complexes are distinguished by (i) a ratio of label to labeling reagent, or (ii) a phys. property of said label, or (iii) a ratio of labeling reagent to said target-binding antibody, or (iv) by said target-binding antibody. particularly useful for fluorophore labels that can be attached to labeling reagents and subsequently immuno-labeled complexes in ratios for the detection of multiple targets.

# <u>MSTR</u> <u>1</u>

$$G3 = 18-13 \ 20-6$$

$$\begin{array}{c} \text{HN---CH} \\ 18 \end{array} \begin{array}{c} \text{CH} \\ 20 \end{array}$$

$$G4 = 501$$

Patent location:

disclosure

- L13 ANSWER 9 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
- AN 144:172711 MARPAT
- TI Colorant compounds for phase change inks with good chroma strength
- IN Banning, Jeffrey H.; Wu, Bo; Bridgeman, Randall R.; Titterington, Donald R.
- PA Xerox Corp., USA
- SO U.S. Pat. Appl. Publ., 80 pp. CODEN: USXXCO
- DT Patent
- LA English
- FAN. CNT 1

$\Gamma F$	PATENT NO.	KIND	DATE	APPLICATION NO. DATE
PΙ	US 20060020141 CN 1724532 BR 2005002897	A1 A A	20060126 20060125 20060307	US 2004-898028 20040723 CN 2005-10087525 20050722 BR 2005-2897 20050725
PF GI	AI US 2004-898028	20040	723	

AB The present invention relates to compds. I, wherein M = metal ion having a pos. charge of y; y = ≥2 integer, the metal ion being capable of forming a compound with at least two chromogen moieties, or metal-containing moiety capable of forming a compound with ≥2 chromogen moieties; z = ≥2 integer; R1, R2, R3, R4 = H, alkyl, aryl, arylkyl, or alkylaryl; R5, R6, R7 = alkyl, aryl, arylalkyl, alkylaryl, halogen, or group; a, b = 0-3 integer; c = 0-4 integer; d = 1-5 integer; Q- = C00- or S03-; A = organic anion; and CA = H or cation associated with all but one of the Q- groups. Thus, 100 g fluorescein was reacted with 128.5 g phosphorus pentachloride at 140° for 6 h, 105 g of the resulting mixture was reacted with 288 g distearylamine at 120° in the presence of 0.62 mol calcium oxide and 0.85 mol zinc chloride, purified, 229 g of the resulting tetrastearyl colorant was mixed with 12.2 g zinc chloride and stirred for 18 h to give a colorant, which was formulated into a phase change ink, showing good chroma strength.

Ι

#### MSTR 1

$$G2 = 360$$

G13 = 0

= CONH2 (opt. substd.) = SO3H (opt. substd.) G16

G17

Patent location:  ${\it claim}\ 1$ 

additional ring formation also claimed Note:

L13 ANSWER 10 OF 36 MARPAT COPYRIGHT 2010 ACS on STN

AN 144:152002 MARPAT

TI Preparing phase change inks and certain magenta colorants for phase change inks

IN Wu, Bo; Banning, Jeffrey H.; Bridgeman, Randall R.; Titterington, Donald R.

PA Xerox Corporation, USA

SO U.S. Pat. Appl. Publ., 123 pp. CODEN: USXXCO

DT Patent

LA English

FAN. CNT 1

PATENT NO. KIND DATE APPLICATION NO. DATE
PI US 20060021546 A1 20060202 US 2004-898724 20040723
US 7311767 B2 20071225

PRAI US 2004-898724 20040723

AB Preparing phase change inks comprises admixing (a) a phase change ink carrier, (b) a colorant of the anthraquinone type, and (c) a organic metal salt (M2v+)w(A2w-)v of which the metal portion M2 is either a metal ion having pos. charge +v, a metal-containing moiety, or a mixture, and A2 is an anion having neg. charge -w, where M2 is metal, where A2 is anion, the admixing occurring at a temperature at which the ink carrier is a liquid

#### MSTR 1

$$G2 = 360$$

G13 = 0

G16 = CONH2 (opt. substd.) G17 = S03H (opt. substd.)

Patent location: claim 1

Note: additional ring formation also claimed

RE. CNT 57 THERE ARE 57 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 11 OF 36 MARPAT COPYRIGHT 2010 ACS on STN L13

AN 144:151809 MARPAT

ΤI Phase change inks

IN Wu, Bo; Banning, Jeffrey H.; Bridgeman, Randall R.; Titterington, Donald

PA Xerox Corp., USA

S0U.S. Pat. Appl. Publ., 87 pp. CODEN: USXXCO

DT Patent

LA English

PATENT NO.	KIND	DATE	API	PLICATION NO.	DATE
PI US 20060016369	A1	20060126	US	2004-898432	20040723
US 7033424 CN 1724597	B2 A	20060425 20060125	CN	2005-10087524	20050722
BR 2005002915	A	20060307		2005-2915	20050722
PRAI US 2004-898432	20040′	723			
OS CASREACT 144:15	1809				
GI					

$$\begin{bmatrix} R2 & R3 \\ Y & Y \\ (R5)_a & (R6)_b \\ & CA_{d-1}^{\dagger} \\ & & Z \end{bmatrix}_z M zA^{-1}$$

AB Phase change ink (or hot-melt ink) compns. comprise a phase change ink carrier and a colorant compound of the formula I wherein M is either (1) a metal ion having a pos. charge of +y wherein y is an integer which is at least 2, said metal ion being capable of forming a compound with at least 2 chromogen moieties, or (2) a metal-containing moiety capable of forming a compound with at least 2 chromogen moieties, z is an integer representing the number of chromogen moieties associated with the metal and is at least 2, R1, R2, R3, R4, R5, R6, R7, a, b, c, d, Y, and z are as defined in the document, Q- is a COO- group or a SO3- group, A is an organic anion, and CA is either a hydrogen atom or a cation associated with all but one of the Qgroups.

### MSTR 1

$$G2 = 360$$

G13 = 0

G16 = CONH2 (opt. substd.) G17 = S03H (opt. substd.)

Patent location: claim 1

Note: additional ring formation also claimed

RE. CNT 56 THERE ARE 56 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L13 ANSWER 12 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
```

AN 143:345484 MARPAT

TI Method of efficiently modifying surface of bacterium

IN Nishimura, Shinichiro; Sadamoto, Reiko; Ueda, Taichi; Niikura, Kenichi

PA Shionogi Co., Ltd., Japan

SO PCT Int. Appl., 67 pp.

CODEN: PIXXD2

DT Patent

LA Japanese

FAN. CNT 1

	PAT	ENT	NO.		KI	ND	DATE			A	PPLI	CATI	ON N	0.	DATE				
PΙ	WO	2005	 0954	 28	A	 1	 2005	 1013		W	0 20	 05-J	 P594	 5	2005	 0329			
		W:	ΑE,	AG,	AL,	AM,	AT,	AU,	ΑZ,	BA,	BB,	BG,	BR,	BW,	BY,	BZ,	CA,	CH,	
			CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DZ,	EC,	EE,	EG,	ES,	FΙ,	GB,	GD,	
			GE,	GH,	GM,	HR,	HU,	ID,	IL,	IN,	IS,	JP,	KE,	KG,	KP,	KR,	KZ,	LC,	
			LK,	LR,	LS,	LT,	LU,	LV,	MA,	MD,	MG,	MK,	MN,	MW,	MX,	ΜZ,	NA,	ΝΙ,	
			NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RU,	SC,	SD,	SE,	SG,	SK,	SL,	SM,	
			SY,	TJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	VN,	YU,	ZA,	ZM,	ZW
		RW:	BW,	GH,	GM,	KE,	LS,	MW,	ΜZ,	NA,	SD,	SL,	SZ,	TZ,	UG,	ZM,	ZW,	AM,	
			ΑZ,	BY,	KG,	KZ,	MD,	RU,	TJ,	TM,	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	
			EE,	ES,	FΙ,	FR,	GB,	GR,	HU,	IE,	IS,	ΙT,	LT,	LU,	MC,	NL,	PL,	PT,	
			RO,	SE,	SI,	SK,	TR,	BF,	ВJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	
			MR,	NE,	SN,	TD,	TG												

PRAI JP 2004-101518 20040330

AB A bacteria with a functional substance such as glucosamine derivative on the surface is prepared. In particular, a bacteria such as lactic acid bacteria which enhances intestinal absorption is produced. Also provided is a compound represented by the general formula (I): wherein R1, R2, and R3 each independently is hydrogen or a protective group; R4 is hydrogen, optionally substituted acetyl, optionally substituted monophosphate, optionally substituted diphosphate, or optionally substituted triphosphate; W is -(C = 0)-CH2-, -CC-, or a group imparting a function; X is a single bond or -(CH2)n-; n is an integer of 1 to 10; and Y is -(C = 0)-R8 (wherein R8 is alkyl), -CCH, or a group imparting a function.

#### MSTR 2

$$_{3}^{C}(0)$$
-NH—NH2

Patent location:

claim 12

RE. CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L13 ANSWER 13 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
- AN 143:219552 MARPAT
- TI Azo dye, colored curable composition, color filter and producing method therefor
- IN Seto, Nobuo; Suziki, Nobuo
- PA Fuji Photo Film Co., Ltd., Japan; Fujifilm Corporation
- SO U.S. Pat. Appl. Publ., 73 pp. CODEN: USXXCO
- DT Patent
- LA English
- FAN. CNT 3

TAIN.	PATENT NO.	KIND	DATE	APPLICATION NO. DATE	E 	
PΙ	US 20050175908	A1	20050811	US 2005–43991 2005012	28	
	US 7601819 JP 2005213357	В2 А	20091013 20050811	JP 2004-21391 2004012	29	
	JP 2005215286 JP 4332042	A B2	20050811 20090916	JP 2004-21392 20040129	29	
	JP 2005274788	A	20051006	JP 2004-85658 2004032	23	
PRAI	JP 4328250 JP 2004–21391	B2 20040	20090909 0129			
	JP 2004-21392 JP 2004-85658	20040 20040				
GΙ	·					

#### \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A dye is represented by I, a colored curable composition using the same, and a colored curable composition for color filter and liq crystal display including a dye represented by II and at least one dye represented by III or IV (Ral is an aliphatic group, an aryl group, a heterocyclic group, an acyl group or the like; Xal is -CRa3= or N; Ra2 and Ra3 = H or a substituent; B is a coupler residue; A is a residue of a 5-membered heterocyclic diazo component A-NH2; B1 and B2 is -CR1=, -CR2= or N; R5 and R6 is H, an aliphatic group, an aromatic group, a heterocyclic group or the like; G, R1 and R2 is H, halogen, an aliphatic group, an aromatic group, a heterocyclic group, a cyano group, a carboxyl group, a carbamoyl group, an alkoxycarbonyl group or the like; Rd1 to Rd4 is H or an aliphatic group; Rd5 is a sulfo group or a sulfamoyl group; Rd6 to Rd10 is a substituent; m, n, p and q = 0 to 3; r = 0 to 4).

#### MSTR 3

G2 = CONH2 / SO3H Patent location:

claim 3

```
ANSWER 14 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
L13
     143:22621
AN
                 MARPAT
ΤI
     Competitive immunoassay using a ligand analog covalently bonded to a
     fluorescent reporter molecule
     Beechem, Joseph; Gee, Kyle; Hagen, David; Johnson, Iain; Kang, Hee Chol;
IN
     Pastula, Christina
PA
     Molecular Probes, Inc., USA
S0
     PCT Int. Appl., 123 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN. CNT 1
     PATENT NO.
                              DATE
                        KIND
                                              APPLICATION NO.
                                                                 DATE
     WO 2005050206
PΙ
                         A2
                              20050602
                                              WO 2004-US30711
                                                                 20040917
     WO 2005050206
                         A3
                              20060302
          W:
              AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY,
                                                                      BZ,
                                                                          CA, CH,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC,
                                                         EE,
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                                                     JP,
              GE, GH, GM, HR, HU,
                                   ID,
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                                            IN,
                                                IS,
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                                              US 2004-943463
                                                                 20040917
     US 20060160068
                              20060720
                         A1
     US 7282339
                              20071016
                         B2
PRAI US 2003-504322P
                        20030917
     US 2003-505455P
                        20030923
AB
     The present invention provides ligand-detection reagents, ligand analogs
     and methods for determining the presence of a ligand in a sample.
```

ligand-detection reagent comprises a ligand-binding antibody and a ligand analog to form an antibody-ligand analog complex wherein the ligand analog is covalently bonded to a reporter mol. This complex may addnl. comprise a labeling protein non-covalently bonded to the antibody to form a ternary complex wherein the labeling protein comprises a monovalent antibody fragment or a non-antibody protein that is covalently bonded to a label The reporter mol. is either quenched by the ligand-binding antibody or by the label moiety of the labeling protein, depending on the reporter mol. and the ligand-binding antibody, wherein the amount of quenching is directly related to the amount of ligand present in the sample. Alternatively, the ligand analog is fluorogenic wherein the ligand analog is essentially non-fluorescent in solution but when bound by the ligand-binding antibody the detectable signal increases. In this instance a decrease in signal, as opposed to the relieving of quenching, is measured for the presence of a target ligand.

### MSTR 1

$$1^{G4} - G3 - G1$$
 $G6 - G1$ 

$$G3 = 18-13 \ 20-6$$

$$\underset{18}{\text{HN---CH}}\underset{2}{\text{--}\text{CH}}_2$$

$$G4 = 501$$

Patent location:

claim 1

RE. CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L13
     ANSWER 15 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
     143:9187 MARPAT
AN
ΤI
     Preparation of heterocycle or dye compounds containing thiosulfate
     moieties as labeling agents
     Haugland, Richard; Kang, Hee Chol
IN
PA
     Molecular Probes, Inc., USA
S0
     PCT Int. Appl., 64 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN. CNT 1
     PATENT NO.
                        KIND
                              DATE
                                               APPLICATION NO.
                                                                 DATE
PΙ
     WO 2005047242
                         A2
                              20050526
                                               WO 2004-US36846
                                                                 20041105
     WO 2005047242
                         A3
                              20050818
         W:
              AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY,
              CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC,
                                                         EE,
                                                              EG, ES,
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                                                                               DK,
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              EE, ES,
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                                                                           PT,
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              SE, SI,
                      SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
                       TD, TG
              NE, SN,
     US 20050250957
                         A1
                              20051110
                                              US 2004-982301
                                                                 20041105
PRAI US 2003-518151P
                        20031107
     CASREACT 143:9187
0S
GI
```

AB The present invention provides compds. containing a thiosulfate group represented by formula R-S-S03- or R-S-S03H (R = a reporter group, a carrier mol., or a solid support; wherein the reporter group comprises a fluorophore, a phosphorophore, a binding pair member, a polypeptide, a nucleic acid, an enzyme substrate, or a radioisotope tag; the carrier mol. comprises a polypeptide, a protein, a polysaccharide, a carbohydrate, a nucleic acid, a hapten, a psoralen, a drug, a toxin, a hormone, a lipid, a synthetic polymer, a polymeric microparticle, a biol. cell, or a virus), methods for their preparation, and their use for preparing a labeled target analyte. The thiosulfate group reacts with a thiol group to form a disulfide bond. Thus, to a solution of 4,4-difluoro-5,7-dimethyl-4-bora-3a,4a-diaza-s-indacene-3-propionylethylenediamine hydrochloride (358 mg, 1.00 mmol) and

N,N-diisopropylethylamine (200 µL, 1.16 mmol) in 50 mL methanol was added a solution of 2,3,5,6-tetrafluorophenoxycarbonylmethyl thiosulfate, N,N-diisopropylethylamine salt (530 mg, 1.16 mmol) in 4 mL dry DMF. After being stirred at room temperature for 2 h, the reaction mixture was concentrated in vacuo and the crude product was purified by column chromatog. on silica gel eluting with 10% methanol in chloroform and then converted to sodium form by treating with Dowex 50 WX (sodium form) to give 421 mg of the boradiazaindacene (I) as an orange solid. The compound I showed the absorption maximum at 504 nm in methanol and the emission maximum at 510 nm in methanol. I formed a dye-protein conjugate with a degree of substitution of .apprx. 0.20 which released protein by treatment with dithiothreitol.

### MSTR 1

$$G1 = 301$$

$$G2 = 7-6 8-3$$

$$G3 = 24-6 \ 17-8$$

$$_{24}^{G5}$$
—C (0)<sub>22</sub>H—G10<sub>20</sub>H—C (0)-G5—<sub>1</sub>G4

$$G5 = (0-5) \text{ CH2}$$
  
 $G11 = 223$ 

## <sub>2</sub>QH ●Na

Patent location: claim 1

Note: also incorporates claim 12

RE. CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L13 ANSWER 16 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
- AN 142:116009 MARPAT
- TI Rhodamine dye derivatives and their use for phase change inks.
- IN Banning, Jeffery H.; Wu, Bo; Duff, James M.; Wedler, Wolfgang G.; Thomas, Jule W., Jr.; Bridgeman, Randall R.
- PA Xerox Corporation, USA
- SO Eur. Pat. Appl., 184 pp.
  - CODEN: EPXXDW
- DT Patent
- LA English
- FAN. CNT 1

FAN. CNT 1						
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PΙ	EP 1493781 A1		20050105	EP 2004-11834	20040518	
	EP 1493781	B1	20060517			
	R: AT, BE,	CH, DE	, DK, ES, FR,	GB, GR, IT, LI, LU,	, NL, SE, MC, PT,	
	IE, SI,	LT, LV	, FI, RO, MK,	CY, AL, TR, BG, CZ,	, EE, HU, PL, SK, H	R
	US 20050011410	A1	20050120	US 2003-607373	20030626	
	US 6998493	В2	20060214			
	CA 2471529	A1	20041226	CA 2004-2471529	20040618	
	MX 2004006263	A	20050203	MX 2004-6263	20040624	
	CN 1576276	A	20050209	CN 2004-10062052	20040625	
	CN 100460403	С	20090211			
	BR 2004002451	A	20050524	BR 2004-2451	20040625	
	JP 2005015806	A	20050120	JP 2004-190146	20040628	
	US 20050228183	A1	20051013	US 2005-141898	20050601	
	US 7301025	В2	20071127			
PRAI	US 2003-607373	20030	626			
GI						

#### \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Organometallic derivs. of rhodamine dyes, such as I is used for phase change and jet-printing inks. A typical composition for phase change inks is prepared by melting together a polyethylene wax, stearyl stearamide wax, tetraamide resin, urethane resin from hydroabietyl alc. and isophorone diisocyanate, isophorone diisocyanate, urethane resin from stearyl isocyanate and glycerol-based alc., antioxidant, I and a secondary colorant (brominated quinizarin derivs.) at 135°, filtering and solidifying at room temperature. The magenta phase change ink thus prepared exhibits a viscosity 10.80 cP at 140°.

#### MSTR 1

$$G2 = 360$$

G13 = 0

G16 = CONH2 (opt. substd.) G17 = S03H (opt. substd.)

Patent location: claim 1

Note: additional ring formation also claimed

RE. CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L13 ANSWER 17 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
- AN 142:95970 MARPAT
- TI Phase change inks containing colorant compounds
- IN Wu, Bo; Banning, Jeffrey H.; Duff, James M.; Wedler, Wolfgang G.; Titterington, Donald R.
- PA Xerox Corporation, USA
- SO Eur. Pat. Appl., 226 pp.
- CODEN: EPXXDW
- DT Patent
- LA English

FAN. CNT 1

FAN.	PATENT NO.	KIND DATE	APPLICATION NO.	DATE
PΙ	EP 1491596 R: AT, BE,	A1 20041229	EP 2004-12372 GB, GR, IT, LI, LU,	20040525 NI SE MC DT
				EE, HU, PL, SK, HR
	US 20050016417	Á1 20050127	ÚS 2003-606705	20030626
	US 6860931	B2 20050301		
	CA 2472113	A1 20041226	CA 2004-2472113	20040622
	CA 2472113	C 20080415		
	MX 2004006264	A 20050203	MX 2004-6264	20040624
	CN 1611557	A 20050504	CN 2004-10062050	20040625
	CN 100497498	C 20090610		
	JP 2005015809	A 20050120	JP 2004-190286	20040628
	BR 2004002524	A 20050524	BR 2004-2524	20040628
PRAI	US 2003-606705	20030626		
GI				

- \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY AVAILABLE VIA OFFLINE PRINT \*
- AB Phase change inks comprising a carrier and a colorant I or II, wherein R1, R2, R3, R4, R5, R6, R7, a, b, c, d, Y, Q, Q-, A, and CA are as defined herein.

## MSTR 1

G2 = 360

G13 = 0

G16 = CONH2 (opt. substd.) G17 = SO3H (opt. substd.)

Patent location: claim 1

Note: additional ring formation also claimed

RE. CNT 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 18 OF 36 MARPAT COPYRIGHT 2010 ACS on STN

AN 142:95722 MARPAT

TI Triphenylmethane analog colorant compounds

IN Banning, Jeffrey H.; Wu, Bo; Duff, James M.; Wedler, Wolfgang G.; Titterington, Donald R.

PA Xerox Corporation, USA

SO Eur. Pat. Appl., 231 pp.

CODEN: EPXXDW

DT Patent

LA English

FAN. CNT 1

FAN. (	JNT	1																
	PATENT NO.			KIND	DATE	DATE		Al	PPLI	CATI	ON N	0.	DATE					
PΙ	EP 1491590 A1			2004	20041229 EF			20	04-1	 4261		20040617						
	EΡ	1491	1590		В1	2008	0820											
		R:	AT,	BE,	CH, DE,	DK,	ES,	FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,	
			IE,	SI,	LT, LV,	FΙ,	RO,	MK,	CY,	AL,	TR,	BG,	CZ,	EE,	HU,	PL,	SK,	HR
	US	2009	50011	411	A1	2005	0120		US	\$ 20	03-6	0738	2	2003	0626			
	US	7176	6317		В2	2007	0213											
	CA	2472	2115		A1	2004	1226		$C_{I}$	1 20	04 - 2	4721	15	2004	0622			
	MX	$200^{2}$	40062	65	A	2005	0203		$M^{2}$	X 20	04 - 6	265		2004	0624			
	CN	1576	6278		A	2005	0209		Cl	V 20	04-1	0062	051	2004	0625			
	BR	$200^{2}$	40024	45	A	2005	0531		BI	R = 20	04 - 2	445		2004	0625			
	JР	2009	50158	80	A	2005	0120		Л	20	04-1	9028	1	2004	0628			
PRAI	US	2003	3-607	382	200306	526												
GT																		

$$\begin{array}{c} \text{Me} + \text{CH}_2 \\ \text{Me} + \text{CH}_2 \\ \text{N} \\ \text{N} \\ \text{O} \end{array}$$

AB Triarylmethane analogs with 1 of the aromatic rings bonded to the central C atom by OCO or OSO2 bridges in a spiro configuration and (or) 2 of the aromatic rings are bridged at positions ortho to the central C atom are useful as dyes for hot-melt inks. A typical dye I was manufactured by chlorination of fluorescein with PCl5 at 140° in PhCl and reaction of the resulting dichlorofluorescein 10 h at 190° with distearylamine in tetramethylene sulfone in the presence of CaO and ZnCl2.

Ι

## MSTR 1

$$G2 = 360$$

$$G13 = 0$$

G16 = CONH2 (opt. substd.) G17 = SO3H (opt. substd.)

G20 = 2

Patent location:

claim 1

Note:

additional ring formation also claimed

RE. CNT 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

- L13 ANSWER 19 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
- AN 142:95716 MARPAT
- TI Phase change inks containing colorant compounds
- IN Wu, Bo; Banning, Jeffery H.; Duff, James M.; Wedler, Wolfgang G.; Thomas, Jule W., Jr.; Bridgeman, Randall R.
- PA Xerox Corporation, USA
- SO U.S., 72 pp. CODEN: USXXAM
- DT Patent
- LA English
- FAN. CNT 1

FAN. C	PATENT NO.			KIN	ID DATE		APPLICATION NO.				DATE						
PΙ	US 6835238			B1	2004			US 2	2003-6	 60663	1	20030	0626				
		2004 1491	102616 595	357	A1 A1	2004 2004			EP 2	2004-1	11823		20040	0518			
		1491	595	DD	В1	2007	0613	DD.							MG	D.M.	
		R:				DE, DK, LV, FI,										PT, SK,	HR
	CA	2471	,	,	Á1		,	,	,	2004-2	,		20040		,	,	
	MX	2004	00626	<sup>32</sup>	Α	2005	0203		MX 2	2004-6	5262		20040	0624			
		1576			A	2005	0209		CN 2	2004-1	10062	047	20040	0625			
			97497		C	2009											
	•		01580		A	2005				2004-1			20040				
DDAT			00245		A	2005	0531		BR 2	2004-2	2453		20040	0628			
PRAI	US	2003	3-6066	531	200	30626											
GI																	

#### \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

A phase change ink composition comprises a phase change ink carrier and a AB colorant compound of the formula I wherein M is either (1) a metal ion having a pos. charge of +y wherein y is an integer which is at least 2, said metal ion being capable of forming a compound with at least 2 II chromogen moieties, or (2) a metal-containing moiety capable of forming a compound with at least 2 II chromogen moieties (in the structures, z = integer representing the number of chromogen moieties associated with the metal and is at least 2; R1, R2, R3, R4 = H, alkyl, aryl group, arylalkyl, alkylaryl group, wherein R1 and R2 and R3 and R4 can be joined together to form a ring, R1, R2, R3, R4 can each be joined to a Ph ring in the central structure; a, b = 0, 1, 2, or 3; c = 0, 1, 2, 3, or 4; R5, R6, R7 = alkyl, aryl, arylalkyl, alkylaryl, halogen, ester, amide, sulfone, amine, ammonium, nitrile, nitro group, etc. wherein R5, R6, and R7 can each be joined to a Ph ring in the central structure; Y = 0, S, substituted N, substituted C with a proviso; Q- = COO-, SO3- group; d = 1-5; A = anion; CA = H, cation associated with all but one of the Q- groups).

#### MSTR 1

$$G2 = 360$$

G13 = 0

G16 = CONH2 (opt. substd.) G17 = S03H (opt. substd.)

Patent location: claim 1

Note: additional ring formation also claimed

RE. CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 20 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
L13
     137:280622
                  MARPAT
AN
ΤI
     Halogenated rhodamine dye derivatives and their therapeutic applications
IN
     Habi, Abdelkrim; Gravel, Denis; Villeneuve, Luc; Forte, Jean-Pierre; Su,
     Hongsheng; Vaillancourt, Marc
PA
     Theratechnologies Inc., Can.
S0
     PCT Int. Appl., 117 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN. CNT 1
     PATENT NO.
                       KIND
                                              APPLICATION NO.
                              DATE
                                                                DATE
                                                                20020327
PΤ
     WO 2002079183
                              20021010
                                              WO 2002-CA438
                        A1
         W:
              AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ,
                                                                      CA,
                                                                          CH, CN,
              CO, CR, CU, CZ, DE,
                                  DK,
                                       DM,
                                           DZ,
                                                EC,
                                                    EE,
                                                         ES,
                                                             FΙ,
                                                                 GB,
                                                                      GD,
                                                                          GE,
              GM, HR, HU, ID,
                               IL,
                                   IN,
                                       IS,
                                            JP, KE,
                                                    KG, KP,
                                                             KR,
                                                                 KZ,
                                                                          LK,
                                                                     LC,
                                                                              LR,
                                            MK, MN, MW, MX,
              LS, LT,
                      LU,
                          LV,
                               MA,
                                   MD,
                                       MG,
                                                             MZ,
                                                                 NO.
                                                                     NZ,
                                                                          OM.
                                                                              PH.
                  PT,
                               SD,
                                   SE,
                                        SG,
                                            SI,
                                                SK,
                                                    SL,
                                                         TJ,
                                                             TM,
                                                                 TN,
                                                                      TR,
                      RO,
                          RU,
                                                                          TT,
                                                                              TZ,
              UA,
                 UG,
                      US,
                          UZ,
                               VN,
                                   YU,
                                       ZA,
                                            ZM,
                                                ZW
         RW: GH,
                  GM,
                      KE, LS, MW, MZ, SD,
                                            SL, SZ, TZ, UG, ZM, ZW, AT,
                                                                          BE,
                                                                              CH,
                      DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT,
              CY,
                 DE,
                                                                          SE,
              BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN,
                                                                          TD,
                                                                              TG
                                                                20010402
     CA 2342675
                              20021002
                                              CA 2001-2342675
                        A1
     CA 2410273
                                              CA 2002-2410273
                                                                20020327
                        A1
                              20021010
```

EP 2002-708105 EP 1276734 20030122 20020327 A1 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR 20030401 BR 2002004489 Α BR 2002-4489 20020327 JP 2004518766 Τ 20040624 JP 2002-577810 20020327 MX 2002011638 20030514 MX 2002-11638 20021125 Α US 2003-297088 US 20030212126 20031113 20030530 A1 US 7560574 20090714 B2 US 20090176869 A1 20090709 US 2009-403819 20090313

AU 2002-242560

20020327

PRAI CA 2001–2342675 20010402 US 2001–822223 20010402 W0 2002–CA438 20020327 US 2003–297088 20030530

C

A1

20090811

20021015

CA 2410273

AU 2002242560

AB Bromo derivs. of rhodamine 110, rhodamine B, and rhodamine 6G and other halo rhodamine derivs. are useful as intermediates and as bactericides and antiviral agents and in the treatment of immunol. disorders. In an example, rhodamine B Me ester was dihydrogenated and then brominated and oxidized and treated with acetic acid to provide the purple acetate salt of 2,7-dibromorhodamine B Me ester.

#### MSTR 1

G1= S03H

= phenylene (opt. substd. by (1-4) G1) G7

G8

G12

= heterocycle <containing 1 heteroatom, 1 N,
 attached through 1 N, saturated> (opt. substd.)

claim 1 Patent location:

Note: additional ring formation also claimed

substitution is restricted Note:

THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD RE. CNT 4

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 21 OF 36 MARPAT COPYRIGHT 2010 ACS on STN

AN 137:95164 MARPAT

TI Fluorescent xanthene derivative dyes, their production and their use

IN Gao, Jianxin; Giese, Roger W.

PA Northeastern University, USA

SO PCT Int. Appl., 38 pp. CODEN: PIXXD2

DT Patent

LA English

FAN. CNT 1

1 1111	PATENT NO.	KIND	DATE	APPLICATION NO. DATE	
PΙ	WO 2002055512	A1	20020718	WO 2002-US801 20020110	
	W: US RW: AT, BE,	СН, СҮ	, DE, DK, E	ES, FI, FR, GB, GR, IE, IT, LU, MC, N	ΙL,
	PT, SE, US 20040054195		20040318	US 2003-250975 20030710	

PRAI US 2001-261710P 20010112 WO 2002-US801 20020110

AB Secondary amide xanthene derivs., termed "xanthamides", and other xanthene derivs., are obtained as fluorescent dyes which can have much higher photostability than related dyes such as fluorescein and BODIPY-FL. Examples are presented in which the synthesis begins with fluoresceins or rhodamines. A diversity of xanthamide and related xanthene dyes can be prepared with a broad variation of physicochem. properties to enhance the usefulness of fluorescence in biol. and chemical anal., and in other areas. Xanthamides can also be used as indicators or quenchers of reactive oxygen or free radical species.

## MSTR 1

$$G1 = 22$$

## 2<sup>C</sup><sub>2</sub>(0)-G2

G2 = NH2 (opt. substd.)

G8 = NH2

G9 = S03H (opt. substd.)

Patent location: claim 1

RE. CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L13
     ANSWER 22 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
     136:371071 MARPAT
AN
ΤI
     Atropisomers of asymmetric xanthene fluorescent dyes and use in DNA
     sequencing and fragment analysis
IN
     Lee, Linda G.; Taing, Meng C.; Rosemblum, Barnett B.
PA
     PE Corporation, USA
S0
     PCT Int. Appl., 89 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN. CNT 1
     PATENT NO.
                       KIND
                             DATE
                                            APPLICATION NO.
                                                              DATE
PΙ
                             20020510
     WO 2002036832
                        A2
                                            WO 2001-US48654
                                                              20011030
     WO 2002036832
                        A3
                             20020801
             AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI,
                                                               GB,
                                                                   GD,
                                                                       GE,
             GM, HR, HU, ID,
                             IL, IN, IS, JP, KE, KG, KP,
                                                           KR,
                                                               KZ,
                                                                   LC,
                                                                       LK, LR,
                              MA, MD,
                         LV,
                                      MG,
                                          MK, MN,
                                                   MW,
                                                       MX,
                                                           MZ,
             LS, LT,
                     LU,
                                                               NO,
                                                                   NZ,
                                                                        PL,
                                                                            PT,
                     SD, SE,
                              SG, SI, SK,
                                          SL, TJ,
                                                  TM,
                                                               TZ,
             RO, RU,
                                                      TR,
                                                           TT,
                                                                   UA,
                                                                        UG,
                                                                            UZ,
             VN, YU, ZA, ZW
         RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
                     ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE,
                                                                        TR, BF,
             BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD,
                                            US 2000-704966
     US 6448407
                        В1
                             20020910
                                                              20001101
     CA 2426121
                        A1
                             20020510
                                            CA 2001-2426121
                                                              20011030
     AU 2002030914
                             20020515
                                             AU 2002-30914
                                                              20011030
                        Α
                             20030730
     EP 1330550
                        A2
                                            EP 2001-991171
                                                              20011030
             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
         R:
             IE, SI, LT, LV, FI, RO, MK, CY, AL, TR
                             20041028
     JP 2004532805
                        Τ
                                             JP 2002-539575
                                                              20011030
     US 20030055243
                             20030320
                                            US 2002-227058
                                                              20020821
                        A1
     US 6649769
                             20031118
                        В2
     US 20040229235
                             20041118
                                            US 2003-716165
                        A1
                                                              20031118
     US 7038063
                             20060502
                        В2
     US 20060188915
                        A1
                             20060824
                                             US 2006-381342
                                                              20060502
     US 20070254298
                        A1
                             20071101
                                            US 2007-733014
                                                              20070409
PRAI US 2000-704966
                       20001101
     WO 2001-US48654
                       20011030
     US 2002-227058
                       20020821
     US 2003-716165
                       20031118
     US 2006-381342
                       20060502
AB
     Substantially pure atropisomers of xanthene compds., and use in variety of
     mol. biol. applications, are disclosed. Use of atropisomeric xanthene
     fluorescent dyes as labels for substrates such as nucleotides,
     nucleosides, polynucleotides, polypeptides and carbohydrates, is claimed.
     Applications include DNA sequencing, DNA fragment anal., PCR, SNP anal.,
     oligonucleotide ligation, amplification, minisequencing, and primer
                 Synthesis of those compds. are described. Sequencing of pGEM
     with phosphate-linker, energy-transfer terminator ddATP, and ddGTP is
```

described.

$$G3 = 29$$

$$G5 = 69$$

G11 = C(0)G17 = S03H

Patent location:

claim 1

RE. CNT 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 23 OF 36 MARPAT COPYRIGHT 2010 ACS on STN L13

136:65631 MARPAT AN

ΤI Fluorometric labeling method for screening protoporphyrinogen oxidase inhibitors as potential herbicides

Schallner, Otto; Zitzmann, Werner; Tietjen, Klaus-Guenther IN

Bayer Aktiengesellschaft, Germany; Bayer Cropscience AG PA

S0Eur. Pat. Appl., 29 pp. CODEN: EPXXDW

DT Patent

LA German

FAN. CNT 1

TAIN.		ΓENT	NO.		KI.	ND	DATE			Al	PPLI	CATI	ON N	0.	DATE			
PΙ		1170			A	_	2002			El	P 200	01-1	1473	 2	2001	0622		
	EP	1170 R:		ВЕ,	A' CH,		2004 DK,		FR,	GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	PT,
					LT,	LV,	FΙ,											
	DE	1003	2633		A	1	2002	0117		Dl	E 200	00-10	0032	633	2000	0705		
	US	2002	200129	960	A	1	2002	0131		U:	S 200	01 - 89	9723	3	2001	0702		
	JР	2002	35509	94	A		2002	1210		J]	P 200	01-20	0069	4	2001	0702		
PRAT	DE	2000	-100:	3263	3 - 2	റററ	705			_								

PRAT DE 2000-10032633 20000705

The invention concerns a fluorometric assay that can be used in high throughput screening of herbicides; inhibitors of protoporphyrinogen oxidase (PPO) are fluorescent-labeled and brought in contact with a PPO solution in the presence of potential herbicides that are assumed PPO Plant exts., purified PPO or genetically engineered PPO are Thus, 2-(2-aminoethoxy)-4-(4-bromo-5-difluoromethoxy-1-methyl-1Hpyrazol-3-yl)-5-fluorobenzonitrile was synthesized and labeled with fluorescein-5-EX succinimidyl ester and with 5-carboxyfluorescein. tracers were used in competitive binding reactions for PPO in barley exts. with the unlabeled compound and 5-amino-1-(2, 6-dichloro-4trifluoromethylphenyl)-4-nitro-1H-pyrazole.

#### MSTR 1

$$G1 = 45$$

$$G2 = 104-3 \ 108-1$$

$$_{1}04$$
—CH2—CH2—NH— $_{1}08$ (0)

G5

= NH = phenylene (opt. substd. by 1 or more G8) = S03H G7

G9

Patent location: claim 10

substitution is restricted Note:

THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD RE. CNT 7

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 24 OF 36 MARPAT COPYRIGHT 2010 ACS on STN

AN 136:1576 MARPAT

TI Oligonucleotides labeled with energy transfer acceptors for use in amplification, hybridization, and ligation assays employing fluorescent nucleic acid stains

IN Singer, Victoria L.; Haugland, Richard P.

PA Molecular Probes, Inc., USA

SO U.S., 25 pp. CODEN: USXXAM

DT Patent

LA English

FAN. CNT 1

I IIII	CIVI				
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PΙ	US 6323337	B1	20011127	US 2000-570343	20000512
	GB 2365866	A	20020227	GB 2001-11507	20010511
	GB 2365866	В	20020731		
	CA 2347505	A1	20011112	CA 2001-2347505	20010514
DDAT	HC 0000 E70040	00000	E10		

PRAI US 2000-570343 20000512

AB The invention relates to oligonucleotides labeled with an energy transfer acceptor useful in conjunction with fluorescent nucleic acid stains. The resulting oligonucleotides are useful for decreasing background fluorescence during amplification assays and in ligation assays, and for detecting hybridization. Thus, PCR reactions may be conducted with primers labeled with N, N'-diphenylrhodamine and the reaction may be monitored in real time if the fluorescent stain SYBR Green I is included in the reaction mixture. The background fluorescence in reactions containing these quenched primers is lower than that observed in those containing unlabeled primers, and, in addition, primer dimers do not contribute to the product signal.

## MSTR 3A

G4 = SO3H

G30 = Ph (opt. substd. by 1 or more G41)

G41 = alkylaminocarbonyl <containing 1-18 C>

(opt. substd.)

G45 = 351

$$_{3}$$
 $\frac{N}{1}$  G12

Patent location: claim 38 Note: or salts

Note: substitution is restricted

Note: additional ring formation also claimed

RE. CNT 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L13
     ANSWER 25 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
     133:336549 MARPAT
AN
ΤI
     Xanthene dyes and their application as luminescence quenching compounds
IN
     Haugland, Richard P.; Singer, Victoria L.; Yue, Stephen T.
PA
     Molecular Probes, Inc., USA
S0
     PCT Int. Appl., 66 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN. CNT 1
     PATENT NO.
                       KIND
                             DATE
                                             APPLICATION NO.
                                                               DATE
PΤ
     WO 2000064988
                             20001102
                                             WO 2000-US10740
                                                               20000421
                        A1
                      JP
         W:
             AU, CA,
         RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL,
             PT,
                 SE
     CA 2335359
                             20001102
                                             CA 2000-2335359
                                                               20000421
                        A1
     CA 2335359
                             20070717
                        C
     EP 1090073
                        A1
                             20010411
                                             EP 2000-926217
                                                               20000421
     EP 1090073
                             20030305
                        В1
         R:
             ΑT,
                 BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
             IE,
                 FΙ
     US 6399392
                                             US 2000-556464
                             20020604
                                                               20000421
                        В1
     AU 751168
                        B2
                             20020808
                                             AU 2000-44781
                                                               20000421
     AT 233795
                        Τ
                             20030315
                                             AT 2000-926217
                                                               20000421
PRAI US 1999-130808P
                       19990423
     WO 2000-US10740
                       20000421
```

GΙ

AB The quenching compds. are N-substituted xanthenes that are substituted by ≥1 (hetero) aromatic quenching moieties. Chemical reactive quenching compds. of this structure possess utility for labeling a wide variety of substances, including biomols. The labeled substances are useful for a variety of energy-transfer assays and applications. Specifically the quenching compds. have the structure I [R2-R5 = H, F, C1, Br, I, CN, C1-18 alkyl, C1-18 alkoxy, C02R, S03M; M = H, cation; R = H, cation, C1-6 alkyl; R1, R6 = H or R1R2 and/or R5R6 complete a 6-membered aromatic ring; R8, R9 = H, organic group, or form a 5- or 6-membered ring with each other or with R2 and/or R3, resp.; R10 = H, organic group; X = 0, +NR11R12; R11, R12 are defined analogously to R8, R9], in which ≥1 of R8-R12 contains a group with fluorescence quenching ability and ≥1 of R8-R12 contains a conjugated biol. substance or a group reactive in conjugation with biomols.

$$G4 = SO3H$$

$$G41 = 507$$

$$G45 = 351$$

G46 = C(0)

Patent location: claim 1 Note: or salts

Note: substitution is restricted

RE. CNT 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
L13
     ANSWER 26 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
     133:71117 MARPAT
AN
ΤI
     The synthesis of 4,7-Dichlororhodamine dyes and their use in
     polynucleotide sequencing and fragment analysis
     Lee, Linda; Benson, Scott C.; Rosenblum, Barnett B.; Spurgeon, Sandra L.
IN
PA
     The Perkin-Elmer Corporation, USA
S0
     U.S., 16 pp., Cont.-in-part of U.S. Ser. No. 38, 191.
     CODEN: USXXAM
DT
     Patent
LA
     English
FAN. CNT 6
     PATENT NO.
                        KIND
                              DATE
                                               APPLICATION NO.
                                                                 DATE
PΤ
     US 6080852
                              20000627
                                              US 1999-277793
                                                                 19990327
                         Α
     US 5847162
                         Α
                              19981208
                                              US 1996-672196
                                                                 19960627
                                               JP 2002-280013
     JP 2003221515
                         Α
                              20030808
                                                                 19970521
     US 6025505
                              20000215
                                              US 1998-38191
                         Α
                                                                 19980310
     CA 2367868
                                              CA 2000-2367868
                         A1
                              20001005
                                                                 20000324
     CA 2367868
                              20070619
                         C
                                                                 20000324
                                              WO 2000-US8003
     WO 2000058406
                         A1
                              20001005
         W:
              AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY,
                                                                 CA,
                                                                      CH,
                                                                           CN, CR,
              CU, CZ,
                      DE, DK,
                               DM,
                                   DZ,
                                        EE,
                                            ES, FI,
                                                     GB,
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                              20090409
                                               JP 2008-249238
                                                                 20080926
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PRAI US 1996-672196
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                        19990327
     EP 2000-916662
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     JP 2000-608692
                        20000324
```

WO 2000-US8003 20000324 US 2000-578920 20000525 US 2004-788660 20040226

GI

#### \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A set of 4,7-dichlororhodamine compds. useful as fluorescent dyes are disclosed having the structures (I) and (II); wherein R1 -R6 are hydrogen, fluorine, chlorine, lower alkyl, lower alkene, lower alkyne, sulfonate, sulfone, amino, amido, nitrite, lower alkoxy, linking group, or, when taken together, R1 and R6 is benzo, or, when taken together, R4 and R5 is benzo; R7 -R10, R12 -R16 and R18 may be hydrogen, fluorine, chlorine, lower alkyl, lower alkene, lower alkyne, sulfonate, sulfone, amino, amido, nitrite, lower alkoxy, linking group; R11 and R17 may be hydrogen, lower alkyl, lower alkene, lower alkyne, Ph, aryl, linking group; Y1 -Y4 are hydrogen, lower alkyl, or cycloalkyl, or, when taken together, Y1 and R2, Y2 and R1 Y3 and R3, and/or Y4 and R4 is propano, ethano, or substituted forms thereof, and X1 -X3 taken sep. are hydrogen, chlorine, fluorine, lower alkyl, carboxylate, sulfonate, hydroxymethyl, and linking group, or any combinations thereof. In another aspect, the invention includes reagents labeled with the 4,7-dichlororhodamine dye compds., including deoxynucleotides, dideoxynucleotides, and polynucleotides. In an addnl. aspect, the invention includes methods utilizing such dye compds. and reagents including dideoxy polynucleotide sequencing and fragment anal. methods.

#### MSTR 1

G4 = pyrrolidino G9 = sulfonate

G21 = 364

 $G31 = 534-363 \ 538-25$ 

534 C—CH2-NH-538 (0)

Patent location: claim 1

Note: additional ring formation also claimed Note: also incorporates claims 16 and 22

Note: substitution is restricted

RE. CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 27 OF 36 MARPAT COPYRIGHT 2010 ACS on STN

AN 132:23862 MARPAT

TI Fluorescent rhodamine dye derivatives and their use in diagnostic systems

IN Josel, Hans-Peter; Herrmann, Rupert; Heindl, Dieter; Muehlegger, Klaus; Sagner, Gregor; Drexhage, Karl Heinz; Frantzeskos, Jorg; Arden-Jacob, Jutta

PA Roche Diagnostics G.m.b.H., Germany

SO Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

DT Patent

LA German

FAN. CNT 1

1 11	11. 0111 1			
	PATENT NO.	KIND DATE	APPLICATION NO.	DATE
		·		
PΙ	EP 962497	A1 19991208	EP 1999-110226	19990526
	EP 962497	B1 20010718		
			FR, GB, GR, IT, LI, LU,	NL, SE, MC, PT,
	IE, SI,	LT, LV, FI, RO		
	DE 19824535	A1 19991209	DE 1998-19824535	19980603
	AT 203260	T 20010815	AT 1999-110226	19990526
	US 6184379	B1 20010206	US 1999-324265	19990602
	JP 2000044823	A 20000215	JP 1999-157177	19990603
DD	AT DE 1000 10094E9	10000600		

PRAI DE 1998-19824535 19980603

AB Fluorescent xanthylium and 6-phenyl-10, 11-dihydro-2H-13-oxa-11-aza-1-azoniapentacene derivs. form conjugates with biomols. and are used in labeling and diagnostic systems, especially with oligonucleotides, by using fluorescence resonance energy transfer. In an example, 2-(2, 2, 4-trimethyl-7-methoxy-1, 2-dihydro-1-quinolyl) ethyl acetate and 6-(2-carboxy-3, 4, 5, 6-tetrachlorobenzoyl)-1, 2-dihydro-1-ethyl-7-hydroxy-2, 2, 4-trimethylquinoline were cyclocondensed to give 1-(2-hydroxyethyl)-6-(2, 3, 4, 5-tetrachlorophenyl)-11-ethyl-2, 2, 4, 8, 10, 11-hexamethyl-10, 11-dihydro-2H-13-oxa-11-aza-1-azoniapentacene perchlorate. A phosphoramidite derivative was then prepared for use in oligonucleotide marking.

#### MSTR 1

$$\begin{array}{c} G11 \\ G11 \\ G12 \\ G15 \end{array}$$

G5 = S03H G13 = C0NH2 G15 = 107

G20 = 136

13H ● H

Patent location: claim 1

Note: substitution is restricted

Note: additional ring formation also claimed

RE. CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

- ANSWER 28 OF 36 MARPAT COPYRIGHT 2010 ACS on STN L13
- AN 131:166214 MARPAT
- ΤI Energy transfer dyes with enhanced fluorescence, reagents containing them, and their use in nucleic acid sequencing
- Lee, Linda G.; Spurgeon, Sandra L.; Rosenblum, Barnett Perkin-Elmer Corporation, USA IN
- PA
- U.S., 77 pp., Cont.-in-part of U.S. 5,863,727. CODEN: USXXAM S0
- DT Patent
- English LA

. 11 10 1	CNT 6 PATENT NO.	KIND	DATE	APF	PLICATION NO.	DATE
Ι	US 5945526	 A	19990831	US	1998-46203	19980323
	US 5863727		19990126	US	1996-642330	19960503
	US 5847162	A	19981208	US	1996-672196	19960627
	JP 2003221515	A	20030808	JP	2002-280013	19970521
	US 6335440		20020101		1999-272097	19990318
	US 20020086985	A1	20020704	US	2001-14743	20011029
	US 6849745	В2	20050201			
	US 20050069912	A1	20050331	US	2004-788836	20040226
	US 7169939	В2	20070130			
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	US 7388092	В2	20080617			
	US 20070154925	A1	20070705	US	2006-618679	20061229
	US 7449298	В2	20081111			
	US 20070154926		20070705	US	2006-618683	20061229
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	US 7449149	В2	20081111			
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	US 7432058	B2	20081007			
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RAI	US 1996-642330	19960	503			
	US 1996-672196	19960	627			
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	US 1998-46203	19980	323			
	US 1999-272097	19990	318			
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	US 2001-14743	20011	029			
	US 2004-788836	20040	226			
	US 2006-617667	20061	228			
,	Novel linkers fo	r link	ing a donor o	dve to	an accentor o	dve in an

transfer fluorescent dye are provided. These linkers facilitate the

efficient transfer of energy between a donor and acceptor dye in an energy transfer dye. One of these linkers for linking a donor dye to an acceptor dye in an energy transfer fluorescent dye has the general structure R21ZCOR2R3 (R1=C1-5 alkyl attached to the donor dye; Z=NH, S, O; R2=alkene, diene, alkyne, 5-6-membered ring having at least one unsatd. bond or a fused ring structure which is attached to the carbonyl carbon; R3=functional group which attaches the linker to the acceptor dve). preferred linker is CH2NHCOC6H4CH2NHCO. Thus, 9-(2, 4-dicarboxyphenyl)-3, 6-bis (dimethylamino) xanthylium was esterified (4-CO2H) with N-hydroxysuccinimide (I), condensed with 4-H2NCH2C6H4CO2H, re-esterified with I, and condensed with 4'-(aminomethyl)-5-carboxyfluorescein to give an energy transfer dye (II), esterification of which with I provided a site for coupling to a In DNA sequencing, an oligonucleotide labeled with II was brighter than one labeled with the direct amide of the resp. carboxyrhodamine and (aminomethyl) fluorescein not containing a spacer bridge.

#### MSTR 1

$$G1 - G4 - G3 - G(0) - G5 - G6 - G2$$

$$G2 = 61$$

$$613 - 614$$

$$G10 = S03H$$

$$G13 = 58-6 \ 52-125$$

$$\begin{array}{c|c} G12 & G12 \\ \hline 58 & G12 \\ \hline \end{array}$$

$$G14 = 42$$

Patent location:

Note:

claim 1

additional ring formation and linker-, donor-, or acceptor-containing moieties and dimers also claimed

RE. CNT 31 THERE ARE 31 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
ANSWER 29 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
L13
     130:264438 MARPAT
AN
TΤ
     Sulfonated xanthene derivatives synthesis and applications as fluorescent
     stains
     Mao, Fei; Leung, Wai-Yee; Haugland, Richard P.
IN
PA
     Molecular Probes, Inc., USA
S0
     PCT Int. Appl., 63 pp.
     CODEN: PIXXD2
DT
     Patent
LA
     English
FAN. CNT 2
     PATENT NO.
                       KIND
                             DATE
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                                                               DATE
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     WO 1998-US19921
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AB The present invention describes xanthene dyes, including rhodamines, rhodols and fluoresceins that are substituted one or more times by a sulfonic acid or a salt of a sulfonic acid. The dyes of the invention, including chemical reactive dyes and dye-conjugates are useful as fluorescent probes, particularly in biol. samples.

### MSTR 1

US 1998-209045

WO 1999-US22193

19981209

19990923

G19-G28

G19 = Ph (opt. substd. by 1 or more G21)

G21 = 106

106<sup>(0)</sup>-G26-G24

G26 = NH G28 = 10

$$\begin{array}{c|c}
G1 \\
G10 \\
\hline
G6 \\
G5 \\
\hline
10
\end{array}$$

 $G41 = 8-7 \ 9-10$ 

Derivative: or salts or modified derivatives

Patent location: claim 1

Note: substitution is restricted

RE. CNT 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L13
     ANSWER 30 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
     129:212480 MARPAT
AN
ΤI
     Energy transfer dyes with enhanced fluorescence
IN
     Lee, Linda G.; Spurgeon, Sandra L.; Rosenblum, Barnett
PA
     The Perkin Elmer Corp., USA
S0
     U.S., 83 pp., Cont.-in-part of U.S. Ser. No. 642, 330.
     CODEN: USXXAM
DT
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     English
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FAN. CNT 6
     PATENT NO.
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20080617

В2

US 7388092

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	20070154927	A1	20070705		2006-618693	20061229
	20070207477	A1	20070906	US	2006-618688	20061229
	7449149	В2	20081111	110	0000 010000	00001000
	20070212709	A1	20070913	US	2006-618663	20061229
	7432058	В2	20081007	110	0000 01000	00001000
	20080268509	A1	20081030	US	2006-618667	20061229
	7595162	В2	20090929	***		
	20090118485	A1	20090507		2008-205817	20080905
	2009046685	A	20090305		2008-241854	20080919
	2009073838	A	20090409	JP	2008-249238	20080926
	1996-642330	19960				
	1996-672196	19960				
	1996-726462	19961				
	1997-2203494	19970				
	1997-303039	19970				
	1997-115920	19970				
	2000-10931	19970				
	2000-10932	19970				
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	2002-280013	19970				
	1998-46203	19980				
	1999-272097	19990				
	2000-578920	20000				
	2001-14743	20011				
	2003-288285	20030				
	2004-788836	20040				
	2006-617667	20061	228			
GI						

#### \* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Novel linkers for linking a donor dye to an acceptor dye in an energy transfer fluorescent dye are provided. These linkers facilitate the efficient transfer of energy between a donor and acceptor dye in an energy transfer dye. One of these linkers for linking a donor dye to an acceptor dye in an energy transfer fluorescent dye has the general structure R21Z1C(0)R22R28 where R21 is a C1-5 alkyl attached to the donor dye, C(0) is a carbonyl group, Z1 is either NH, S or 0, R22 is a substituent which includes an alkene, diene, alkyne, a five and six membered ring having at least one unsatd. bond or a fused ring structure which is attached to the carbonyl carbon, and R28 includes a functional group which attaches the linker to the acceptor dye. One example dye prepared was I.

#### MSTR 1

$$G1 - G4 - G3 - C(0) - G5 - G6 - G2$$

$$G2 = 61$$

# $61^{G13} - 61^{4}$

G9 = NH (opt. substd.)

G10 = S03H

G12 = CONH2 (opt. substd.)

 $G13 = 58-6 \ 52-125$ 

$$G14 = 42$$

Patent location: claim 1

Note: additional ring formation also claimed

RE. CNT 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ANSWER 31 OF 36 MARPAT COPYRIGHT 2010 ACS on STN
L13
     128:103381 MARPAT
AN
ΤI
     4,7-Dichlororhodamine dyes, nucleotides labeled therewith, and nucleotide
     sequencing method
     Lee, Linda; Benson, Scott C.; Rosenblum, Barnett B.; Spungeon, Sandra L.
IN
PA
     Perkin-Elmer Corp., USA
S0
     PCT Int. Appl., 60 pp.
     CODEN: PIXXD2
DT
     Patent
     English
LA
FAN. CNT 6
     PATENT NO.
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     WO 9749769
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                             20010307
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             AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
         R:
              IE, FI
     JP 2000505503
                        Τ
                             20000509
                                             JP 1998-502974
                                                               19970521
     JP 4140976
                        B2
                             20080827
                             20010315
     AT 199563
                        Τ
                                             AT 1997-928653
                                                               19970521
     IP 2003221515
                                             TP 2002-280013
                        Α
                             20030808
                                                               19970521
     US 20050112781
                             20050526
                                             US 2004-788660
                                                               20040226
                        A1
     US 7550570
                        В2
                             20090623
     JP 2004305217
                        Α
                             20041104
                                             JP 2004-152623
                                                               20040521
     JP 2009073838
                             20090409
                                             JP 2008-249238
                                                               20080926
                        Α
PRAI US 1996-672196
                       19960627
     JP 1998-502974
                       19970521
     JP 2002-280013
                       19970521
     WO 1997-US8797
                       19970521
     US 2000-578920
                       20000525
```

Ι

GI

The 4,7-dichlororhodamine compds., useful as fluorescent dyes, have the AB structure I [R1-R6 = H, F, C1, lower alkyl, lower alkenyl, lower alkynyl, SO3H, sulfonyl, amino, amido, CN, lower alkoxy, linking group, or R1R6, R4R5 = benzo; Y1-Y4 = H, lower alkyl, or Y1R2 = Y2R1 = (CH2)3 or Y3R3 = Y4R4 = (CH2)3; X1-X3 = H, C1, F, lower alkyl, CO2H, SO3H, CH2OH, linking group]. Thus, a mixture of 2.3 mmol 3-aminophenol, 1.3 mmol 3,6-dichlorotrimellitic anhydride, and 1 mL H2SO4 was heated 12 h at 190° and diluted with water to precipitate a black solid, which was extracted with MeCN and the extract worked up to give 32 mg I (R1-R6 = Y1-Y4 = H; X1 = CO2H; X2, X3 = H, CO2H), \( \lambda \text{max} \) 516 nm. This and other I were used to label nucleotides by standard methods. The reduced width of the emission spectral peaks for the I with respect to known rhodamine dyes without 4,7-dichloro substitution result in an increased ability to perform multicomponent anal. when multiple spatially overlapping species are to be detected.

## MSTR 1A

$$G31 = 534-363 \ 538-25$$

$$C = CH_2 - NH - C(0)$$

Patent location: claim

Note: additional ring formation also claimed Note: also incorporates claims 16 and 22

Note: substitution is restricted

RE. CNT 11 THERE ARE 11 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

ANSWER 32 OF 36 MARPAT COPYRIGHT 2010 ACS on STN L13

128:14127 MARPAT AN

Energy transfer dyes with enhanced fluorescence, reagents containing them, ΤI and their use in nucleic acid sequencing

Lee, Linda G.; Spurgeon, Sandra L.; Rosenblum, Barnett IN

Perkin-Elmer Corporation, USA PA

S0Eur. Pat. Appl., 79 pp. CODEN: EPXXDW

DT Patent

LA English

FAN. (	CNT	6																
PATENT NO.			KI.	ND	DATE			A	PPLI:	CATI	ON N	Э.	DATE					
PΙ	EP	8051	90		A	2	1997	1105		Е	P 19	97-3	03039	9	19970	0502		
	EΡ	805190		АЗ		1998	0107											
	EP	8051	90		В	1	1999	1215										
		R:	AT,	BE,	CH,	DE,	DK,	ES,	FR,	GB,	GR,	ΙΤ,	LI,	LU,	NL,	SE,	MC,	PT,
			IE,	SI,	LT,	LV,	FΙ,	RO										
	US	5863	727		A		1999	0126		U	S 19	96-6	42330	С	19960	0503		
			996								S 19	96-7	26463	2	1996	1004		
			50					0908		Е	P 19	99 - 2	01120	С	19970	0502		
	EΡ		50															
		R:							FR,	GB,	GR,	ΙT,	LI,	LU,	NL,	SE,	MC,	PT,
							FΙ,											
			01127							U	S 20	04 - 7	88660	C	20040	0226		
			570					0623										
PRAI			-6423		$19^{\circ}$	9605	503											
			<b>-</b> 726₄			9610												
			<del>-672</del> 1			9606												
			-3030			9705												
	US	2000	-5789	920	20	0005	525											

AB An energy transfer fluorescent dye comprises a donor dye and an acceptor dye linked by a bridge of specified structure containing an amide, ester, or thio ester group. The linkers facilitate the efficient transfer of energy between a donor and acceptor dye in an energy transfer dye. specifically claimed is CH2NHCOC6H4CH2NHCO. Thus, 9-(2, 4-dicarboxyphenyl)-3, 6-bis(dimethylamino)xanthylium was esterified (4-CO2H) with N-hydroxysuccinimide (I), condensed with 4-H2NCH2C6H4CO2H, re-esterified with I, and condensed with 4'-(aminomethyl)-5-carboxyfluorescein to give an energy transfer dye (II), esterification of which with I provided a site for coupling to a In DNA sequencing, an oligonucleotide labeled with II was nucleoside. brighter than one labeled with the direct amide of the resp. carboxyrhodamine and (aminomethyl) fluorescein not containing a spacer bridge.

## MSTR 1

G2 = 55

= NH (opt. substd.) = SO3H G7

G9

= m-C6H4 (opt. substd. by (1-4) G11) = CONH2 G10

G11

Patent location:  ${\it claim}\ 1$ 

additional ring formation also claimed Note:

ANSWER 33 OF 36 MARPAT COPYRIGHT 2010 ACS on STN L13

127:308529 MARPAT AN

ΤI Xanthene dyes and ink-jet recording liquids containing them

INNinomya, Hidetaka; Oya, Hidenobu; Onodera, Akira; Morimoto, Hitoshi; Ishibashi, Daisuke

PA

Konica Co., Japan Jpn. Kokai Tokkyo Koho, 16 pp. S0CODEN: JKXXAF

DT Patent

LA Japanese

FAN. CNT 1

1 1111. 0111 1					
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI JP <b>0</b> 9255882	A	19970930	JP 1996-65758	19960322	
PRAI JP 1996-65758	19960	322			
GI					

AB Title liqs., which show good color tone and color image fastness, contain xanthene dyes I [(R1, R2) = (H, H), ( $C \ge 2$  alkyl,  $C \ge 2$  alkyl); Ph1, Ph2 = o-alkylphenyl derivative; Y1, Y2 = sulfo, halo; Z = sulfo, carboxyl, sulfamoyl, carbamoyl, alkoxycarbonyl, halo; An- = anion; l, m = 0, 1, 2; n = 1-5]. Thus, 20 g 3', 6'-dichlorofluoran was treated with 31 g o-Me2CHC6H4NH2 in the presence of ZnCl2 at 140-160° for 2 h to give 23 g product, 20 g of which was sulfonated by fuming H2SO4 at  $\leq 30^{\circ}$  to give 15 g I [R1 = R2 = H, Ph1 = o-C6H4CHMe2, Y2 = 2-isopropyl-4-sodiumsulfophenyl, Y1 = Y2 = H, (Z)n = 2-C02-], 1.4 part of which was mixed with diethylene glycol 19.0, triethylene glycol monobutyl ether 9.0, surfactant 0.6, and H20 70.0 parts to give an ink-jet recording liquid, which showed light resistance and gave magenta image with good color tone.

Ι

## MSTR 1

$$\begin{array}{c|c}
G1 \\
G5 \\
G5 \\
G5
\end{array}$$

$$G1 = 10$$

G4 = S03H G5 = C0NH2

Patent location: claim 1

Note: substitution is restricted

ANSWER 34 OF 36 MARPAT COPYRIGHT 2010 ACS on STN L13

AN 127:249517 MARPAT

ΤI Ink-jet inks for lightfast magenta images with good color reproducibility

INNinomya, Hidetaka; Oya, Hidenobu; Onodera, Akira; Morimoto, Hitoshi; Ishibashi, Daisuke

PA

Konica Co., Japan Jpn. Kokai Tokkyo Koho, 23 pp. S0

CODEN: JKXXAF

DT Patent

LA Japanese

FAN CNT 1

TAIN. ONL I					
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
PI JP 09241553 JP 3743052		19970916 20060208	JP 1996-51377	19960308	
PRAI JP 1996-513		308			
GI					

AB The title inks contain dyes I (R = alkyl, alkenyl, aralkyl, carboxyalkyl; X1-10 = H, alkyl, alkenyl, acylamino, alkylsulfonyl, aralkyl, hydroxyalkyl, acyl, amino, cyano, OH, sulfo, carboxy; Y1, Y2 = sulfo, halogen; Z = sulfo, carboxy, sulfamoyl, carbamoyl, alkoxycarbony, halogen; 1, m = 0-2; n = 1-5; An- = counter ion not needed in the cases of inner salt), e, g., I (Z = 2-S03-, 4-S03Na; R = X1 = X6 = R10 = Me; others = H).

Ι

# MSTR 1

G5

= phenylene (opt. substd. by 1 or more G7) G6

= 47 G7

 $4\overline{7} - NH - G10$ 

G8 = C(0) Patent location: Note:

claim 1
substitution is restricted

ANSWER 35 OF 36 MARPAT COPYRIGHT 2010 ACS on STN L13

AN 127:19739 MARPAT

ΤI Ink-jet recording solutions with excellent color tones and light

Ninomiya, Hidetaka; Oya, Hidenobu; Onodera, Akira; Ishibashi, Daisuke IN

PA Konica Co., Japan

S0Jpn. Kokai Tokkyo Koho, 17 pp. CODEN: JKXXAF

DT Patent

LA Japanese FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09087534	A	19970331	JP 1995-246112	19950925
PRAI JP 1995-246112	19950	925		
GI				

Title recording solns. contain phenylxanthene derivs. (I) or (II) [R1-4 = AB substituted aliphatic groups; Y1, Y2, Z = monovalent groups; m, n = 0-3; r = 0-5; An- = anion; R11, R12 = (un)substituted aliphatic groups; X1-8 = un(substituted) alkyl, alkoxy, acylamino, alkylsulfonylamino, alkylsulfonyl, carboxyl, sulfo, halo, H]. Thus, a jet-printing ink comprising phenylxanthene derivative (III) 3, diethylene glycol 10, triethylene glycol monombutyl ether 7, 1-propanol 3, and H2O 78 parts showed good weather resistance and color tone.

G6

= SO3H = Ph (opt. substd. by 1 or more G8) = CONH2 G7

G8

Patent location: claim 1

ANSWER 36 OF 36 MARPAT COPYRIGHT 2010 ACS on STN L13

AN 127:6210 MARPAT

ΤI Magenta ink-jet recording liquids

Onodera, Akira; Ninomya, Hidetaka; Oya, Hidenobu; Ishibashi, Daisuke IN

PA

Konica Co., Japan Jpn. Kokai Tokkyo Koho, 11 pp. S0

CODEN: JKXXAF

DT Patent

Japanese LA

FAN. CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI JP 09071741		19970318	JP 1995-230275	19950907
PRAI JP 1995-230275	19950	907		
GI				

The ink-jet printing liqs. contain magenta dyes I (R1-4 = aliphatic, aromatic, AB H; X, Y, Z = substituent; 1, m = 0-3; n = 0-5; An- = counter anion which does not need when counter anion exists in substituent in the mol; NR1R2 and/or NR3R4 is 1,1-dioxido-4-morpholinyl). The inks give light-resistant Thus, an ink contained II. images.

Ι

II

MSTR 1A

G6 = Ph (opt. substd. by 1 or more G9) G9 = CONH2 Patent location: claim 1

## => d his full

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L1 STRUCTURE UPLOADED
D
L2 SEA SSS SAM L1
D SCA
L3 77 SEA SSS FUL L1
D QUE L3 STAT
L4 58 SEA ABB=ON PLU=ON L3 AND CAPLUS/LC
L5 19 SEA ABB=ON PLU=ON L3 NOT L4
D 1-19 IDE CAN
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D

L8

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L9

15 SEA SSS FUL L7

D QUE L9 STAT

L10

15 SEA ABB=ON PLU=ON L9 AND CAPLUS/LC

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FILE 'MARPAT' ENTERED AT 09:09:53 ON 04 JAN 2010 L12 1 SEA SSS SAM L7 D SCA

L13 36 SEA SSS FUL L7
D QUE L13 STAT
D 1-36 BIB ABS FQHIT

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